

AMERICAN ARTISAN and Hardware Record

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THE SUPER-SMOKELESS FURNACE

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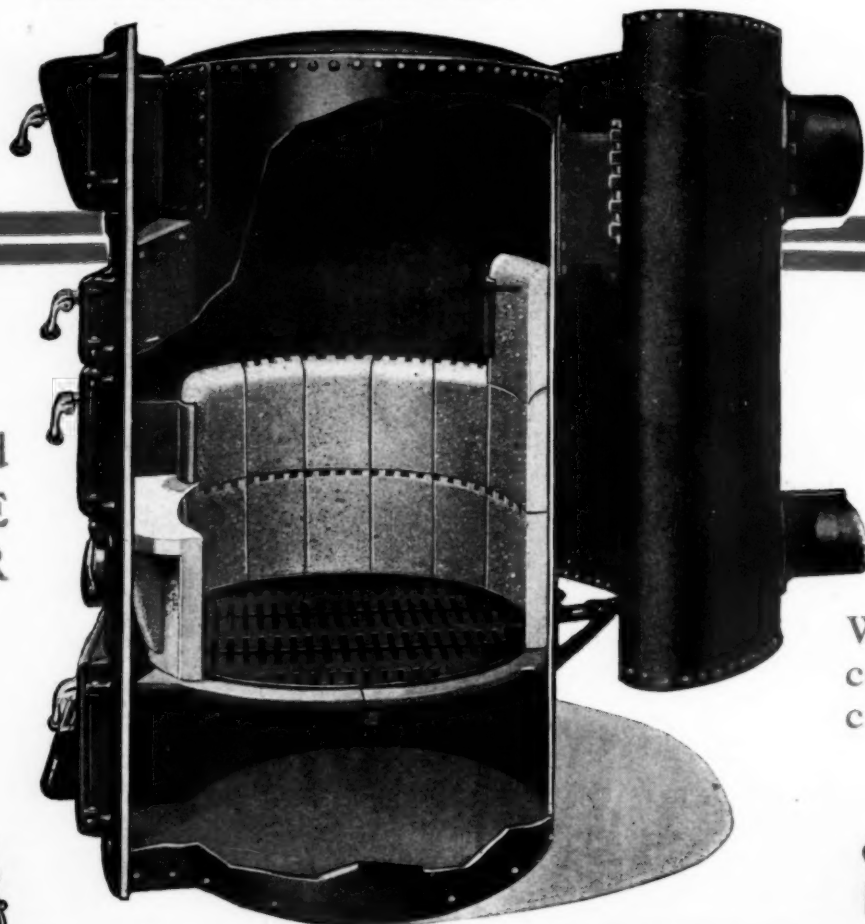
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SERVICE
HEATER



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complete
catalog—



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Des Moines, Iowa

Founded 1880 by Daniel Stern

Published to Serve
the
Warm Air Furnace
Sheet Metal, Stove
and
Hardware Interests

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SOLICITING INQUIRIES

READERS of AMERICAN ARTISAN AND HARDWARE RECORD are constantly writing to us asking for information on thousands of puzzling problems confronting them in their daily work. Many of these inquiries are published in our reading columns. Many more are not because of a lack of space. However, they are all answered by letter when not published and with the greatest despatch.

In addition to the many inquiries received by mail in our office every day, few subscribers come to Chicago without giving us a call by telephone from their hotel or paying a visit to the office in person.

We especially invite personal visits, as in this way we get into closer personal touch with our subscribers and their problems and are thus better able to help them when sticky problems confront them.

When writing remember that the more you give us of the details of your problem the easier it is for us to help you.

This Service Department is maintained for the especial use of the subscribers, and no charge whatsoever is made for it.

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, Pages 64-66-68.

If Wilder Metal Lasts 5 to 7 Years in Steam Tables, How Long Will It Last in Your Work?



Some of the Known Uses of Wilder Metal

Roofing
Siding
Gutters
Cornice
Stacks
Smoke Pipes
Stove Linings
Refrigerators
Ventilators
Steam Tables
Furnaces
Ice Cans
Silos
Cisterns
Culverts
Skylights

**What Do You Make
That Requires
Extra Rust Resistance
at Low Cost?**

"Wilder Metal has been very satisfactory to us. We have used it in a number of instances where it is near railroad yards or where a good deal of soft coal is used and it certainly stood up well.

"This metal is also good for steam tables. The local gas company advised us that they had very good success with this metal. In some instances they have had five to seven years' wear out of it. The gas company speaks very highly of this metal as they have used very much of it here."

STEMEL BROS. MANUFACTURING CO.
BY ARTHUR STEMEL

Wilder Metal is a superior coated sheet, prepared by a patented hot-dipping process at an exceptionally high temperature, and using in the alloy a special aluminum composition which renders the sheet highly resistant to corrosion. May we send samples for test purposes?

THE WILDER METAL CO.
NILES, OHIO

WILDER-METAL

RUST-RESISTANT

SHEETS

A Big Job Well Done—Thanks Due from Entire Sheet Metal Industry.



UNDER the wise policy inaugurated by Secretary Hoover, of the Department of Commerce of the United States, much progress has been made in reducing waste and unnecessary expenditures in the manufacture of many of the products that are in common use today.

Much of this effort has been concentrated upon the reduction of the number of styles, sizes and weights of articles manufactured, and in practically every instance where such reductions have been made, there has not only not been any difficulty in the matter of serving users and converters, but costs of warehousing and manufacturing have been held within reason, something which would have been almost impossible if we were to have continued on the "expansion" idea developed during the past decade.

The most recent "simplification," as this work has very appropriately been termed, is in connection with the Sheet Metal Industry and is, therefore, of more than ordinary interest to most of our readers. The data are published on pages 30 and 31 of this week's issue.

The old saying, "Competition is the life of trade," is just like so many other general statements—more often wrong than right.

Competition, without restraint of reason, is more likely to mean death for legitimate trade than to result in a healthy condition of business, because such competition will always bring with it skimmed products, imperfectly made goods, dissatisfied customers, loss of profits to producers, too high costs of selling, too high costs of storing, too high costs to the consumer or user—in the long run. (There may be a short interval when there is an apparent gain for some, but ultimately, consumer as well as producer will lose where unbridled competition rules.)

There is no reason on earth why a man who may want a size or gauge of sheets which are not on the new list, should not pay a price proportionate to the extra cost of making that special size or gauge, nor is there any reason why the great bulk of sheet users should be forced to pay for something that they never use, and that is what they have been doing under present conditions.

The proposed reductions in sizes and gauges of steel sheets and sheet products are certain to mean greater efficiency in the mills, lower storage costs in wholesale houses and sheet metal shops, and even in the face of the present high wages paid to mill operatives and sheet metal workers, it may, therefore, not be unreasonable to expect that the price to the home owners and other consumers of sheet metal will be such as he can readily see the justice of paying. At the present time many men who might otherwise use sheet metal for cornices and other building purposes are giving preference to other materials because they feel that sheet metal is "out of line"—which, however, is not true in most cases.

We look with great confidence toward a great forward movement in the sheet metal industry and congratulate the Steel Sheet Simplification Committee on the fine work it has accomplished.

* * *

Honesty is not the best policy, because it is not a policy at all, but a matter of conscience.

* * *

If you are honest with yourself you will also be honest with your customer—and not as a matter of policy.

* * *

Did you ever stop to consider the fact that your cut price competitor always wins when you cut your price to meet his?

Random Notes and Sketches.

By Sidney Arnold

My very good friend Ed Scott pulled a surprise on me Saturday, October 11th, when he was married to Miss Gertrude I. Lyons in the city of the bright streets and fast talkers.

Mr. and Mrs. Scott are now sojourning in Havana, Cuba, and that is another thing to wonder at, for why should a good Canadian go to Cuba when there is no Volstead north of New York or Maine?

Anyway, here is wishing you as much joy and happiness as I have had during the twenty-four years that I have spent in double harness.

Would it not be nice if everyone of you fellows in the National Warm Air Heating and Ventilating Association sent a letter of encouragement to Ed, so that he would have them to read when he returns, about November 1st, to the Pickwick Arms, Mosholulu Parkway and Grand Concourse, New York City. (Some spiffy address, isn't it?)

* * *

Paul Brandstedt, the Washington, D. C., sheet metal contractor, met a friend on Pennsylvania Avenue who wore an entirely unaccustomed expression of anxiety.

"What seems to be the matter, old man?" asked the first mentioned gentleman. "You look extremely worried."

"And I am worried," said the other. "To be honest with you, it is on account of some life insurance I took out last Friday."

"But," continued the first, "what has that to do with the woebegone expression of your face?"

"Well, the very next day after I had it written my wife bought a new cook book. Possibly it is all right; but, old man, it certainly looks suspicious."

* * *

Bill Stechow, who makes ice cream molds and other sheet metal specialties in Cincinnati, was discussing a certain tight-fisted indi-

vidual with John Weigel, another of the old-timers in "Porkopolis," and Bill said that the subject of their discussion reminded him of Old Hen Roddy.

Old Hen, said Bill, was fond of boasting of his amazing thriftiness, by virtue of which he has accumulated a fairly substantial bank account.

"You're very careful about your expenditure, aren't you, Uncle Hen?" the village schoolmaster asked one day.

"Yes, perfesser, I'm right smart that way. Fact, I don't recollect that I ever spent but one quarter fer jist dern foolishness. That was when I let a storekeeper talk me into buyin' a pair o' socks."

* * *

During the Ohio sheet metal convention two of the ladies in attendance were overheard by Tony Howe discussing their husbands:

"My husband is so good to his employes."

"Is he?"

"Yes. He came home last night all tired out, poor fellow, and I heard him murmur in his sleep, 'Jim, I'll raise you ten.' And business is so dull, too."

* * *

Last summer when things were a little dull, a Weary Willie called at the office of "Dick" Moncrief. "Can't give you a job," Dick said; "two other men here are on the same errand."

Just then another man came in and said to Dick: "I can find work for one of these men," and pointing to the last comer, he said: "You come along with me and I'll find you something to do."

In pained and surprised tones Weary Willie inquired, "Why me?"

* * *

Going down to Atlantic City on the Chicago Hardware Special were several gentlemen of more than or-

dinary "avoirdufois"—and Louis Kuehn. During the evening, quite late, Louis had occasion to go from the club car to his sleeper and noticed a red lantern hanging on one of the berths, so he spoke to the porter about it:

"I say, George, what's the idea of your hanging that red lantern on that berth?"

"Well, suh, boss, dem's odahs, suh."

"Orders? Whose orders?"

"Comp'ny odahs, suh. De regulation strickly says, 'Hang out de red lights when de reah ob de sleepah am exposed. Yes, suh.'"

* * *

Scene in the lobby of country town hotel.

Room Clerk—"Room, sir? Just sign right here, please."

Frank Eynatten (who has had a discouraging day) — "Blank the blank blank, let's see you SELL me a room!"

* * *

The Random Shot.

I shot an arrow into the air,
It fell in the distance, I knew not where
Till a neighbor said that it killed his calf
And I had to pay him six and a half.
I bought some poison to slay some rats
And a neighbor swore it killed his cats
And rather than argue across the fence
I paid him four dollars and fifty cents.
One night I set sailing a toy balloon
And hoped it would soar till it reached the moon,
But the candle fell on a farmer's straw
And he said I must settle or go to law.
And that is the way with a random shot,
It never hits in the proper spot,
And the joke you spring, that you think smart
May leave a wound in some fellow's heart.

—Nebraska Ironmonger.

Gunton Discusses Properties of Heat from the Standpoint of the Engineer.

GiltEdge Heating Authority Gives Consideration to Various Basic Facts About Heated Air.

THE following paper on "Heat" was prepared by and read before a meeting of heating engineers by W. Gunton, in charge of the Engineering Department of R. J. Schwab & Sons Company:

Heat.

Heat is a form of energy. The meaning of this statement is that a definite quantity of mechanical, or other energy, can always be converted into a definite quantity of heat without any by-products.

The process can also be reversed—a definite quantity of heat can be converted into a definite quantity of mechanical work with no by-products, except heat and work. Heat is that form of energy into which all other forms have a tendency to degenerate. Given a fair chance, almost all forms of energy will automatically turn into the form of heat. It may be described as the lowest, least specialized, or most degenerate unorganized form of energy. It probably consists of kinetic energy of individual molecules of the heated substance. The sum of the vibratory energy of all the molecules is regarded as the heat energy.

By certain means the energy of individual molecules of a hot body can be collected and converted into mechanical or other forms of energy with a corresponding diminution in the molecular or heat energy of the body. Fundamentally, therefore, heat and mechanical energy must be one and the same thing in a different shape.

Heat is invisible—its existence can only be indirectly recognized by the observation of its effects. Heat has two quantities which correspond in a general way to intensity on one hand and quantity on the other. The intensity of heat is termed temperature. This can be measured by a thermometer, while the quantity of heat is termed the British thermal unit, called the thermal unit or the

B. t. u., and is the amount of heat required to raise the temperature of one pound of water from 62 to 63 degrees.

It has been explained above that heat is equivalent not to mechanical force, but to mechanical work. Work, defined scientifically, is the application of force in overcoming some resistance; it is the result of force acting through a certain distance, the distance moved through having as much effect on the result as the force acting. The work done is proportional to the product of the force exerted, multiplied by the space passed through. In English measures the unit of this product is a foot pound, which signifies the amount of energy required to raise one pound one foot. It is itself a complex quantity resembling heat in this respect. Heat can be transformed into work.

Measures of Heat.

As explained, heat cannot be measured by the thermometer; it can, however, be measured by the amount that some standard is raised in temperature. The standard adopted is water. The heat is universally measured by its power to raise the temperature of a given weight of water. The heat unit is 1/180 of the heat required to raise one pound of water from the freezing to the boiling point, and this quantity is termed a British thermal unit, or what is known as a B. t. u.

The amount of heat required to change the temperature of one pound of water one degree is not the same at all temperatures. The variation of heat to mechanical work has been accurately measured and found that one heat unit is equivalent to 778 work pounds. This signifies that the work of raising one pound 778 feet is equivalent to the energy required to change the temperature of one pound of water from 62 to 63 degrees.

The equivalent value of heat and mechanical work is thoroughly established, and under favorable conditions the one can always be transformed into the other. As an illustration of the transformation of heat into work, we have only to consider the numerous forms of steam engines, gas engines, etc. A transformation from mechanical work into heat is shown in the rise of temperature accompanying friction in the use of machines of all classes. The heat produced in the performance of any mechanical work is exactly equivalent to the work accomplished. Seven hundred eighty-eight pounds of mechanical work being performed in order to produce a heating effect equivalent to raising one pound of water 1 degree Fahrenheit.

The term horse-power has been used as a measure of the amount of work. It has been fixed as 33,000 foot pounds per minute. This is equivalent to 42.42 B. t. u.'s per minute.

Temperature.

One of the properties of heat is called temperature. This property can be measured by a thermometer, and is proportional to the intensity of the heat. All our knowledge of heat as obtained by the sensation of feeling deals only with the temperature and the terms in common use by means of which bodies are compared and denominated hot, hotter, hottest, have reference, not to the amount of heat actually in the different bodies, but to the temperature.

There is always a tendency for heat to flow through intervening mediums from a hotter to a colder body, and there is no tendency for heat to flow from a cold to a hot body, although the relative amounts of heat in the two bodies might be different from that indicated by the thermometer.

Thus, as an illustration, a pound of water requires about eight times as much heat to raise it one degree in temperature as a pound of iron, and, hence, when equal weights of both of these materials are at the same temperature, the water contains eight times as much heat as

the iron, although the two bodies would be equally hot.

The tendency for the hotter body to cool off and give up heat to surrounding objects is characteristic of all materials, and if no other heat were supplied, all bodies would come sooner or later to one common temperature. This temperature, when finally reached by all bodies in the universe, will represent the ultimate limit of cooling, and almost the entire absence of heat.

Specific Heat.

The specific heat is a measure of the capacity a body has for absorbing heat. It may be defined as the quantity of heat which has to be added to unit mass of a body in order to raise it through a unit difference of temperature.

Bodies differ greatly in this property—thus one pound of water will absorb about eight times as much heat as the same weight of iron when heated between the same limits of temperature. The term used to express this property of bodies is Specific Heat, and is defined as follows: Specific heat is the quantity of heat required to raise the temperature of a body one degree, expressed in percentage of that required to raise the same amount of water one degree.

Latent Heat.

When heat is applied to any liquid, the temperature will rise until the boiling point is reached, after which heat will be absorbed, but the temperature will not change until the entire process of evaporation is complete, or until the liquid is all converted into vapor.

For illustration, it requires 180 B. t. u.'s to raise the temperature of one pound of water from 32 degrees to the boiling point, or 212 degrees, but it requires 966 B. t. u.'s to turn this pound of water into steam. This 966 B. t. u.'s is called the Latent Heat of vaporization. Heat stored during evaporation is given out when the vapor condenses, so that there is no loss or gain in the total operation of evaporating and condensing.

Practically all the heat used in heating buildings, or for any other

purpose, is derived from the combustion of fuel, chiefly, of course, coal and coke. Combustion as used by the heating engineer, signifies a rapid chemical combination between oxygen and the carbon, hydrogen and sulphur, composing the various fuel. This combination takes place usually at the high temperatures with the evolution of light and heat. It is, therefore, important to consider carefully the phenomena of combustion and the total amount of heat that can be obtained from the combustion of a given weight of fuel of a given kind, and the proportion of this total heat which can be utilized under different conditions.

Heat is obtainable from fuel, owing to the fact that it contains latent chemical energy, which is liberated in the form of heat, or the combination of the combustible elements of the fuel with the oxygen of the air.

The amount of latent chemical energy existing in one pound of the various essential elements of which fuel is composed, will be seen from the following table:

Table of Heating Powers of Elements in Combination with Oxygen.

Name of Substance.	Weight of Oxygen Per Pound of Combustible.	Weight of Products of Combustion Pounds.	B. t. u. Given Off.	Chemical Formula of Combustion	Volume of 1 Lb. of Product at 32° F. C. Ft.
Hydrogen	8.0	9.	62,032	H ₂ -O	19,913
Carbon	2.66	3.66	14,485	C-O ₂	8,157
Sulphur	1.00	2.00	4,032	S-O ₂	5,513
Carbon burnt to C. O.	1.33	2.33	4,452	C-O	12,804

The table shows that in the combustion of hydrogen, one pound of hydrogen by weight combines with eight pounds of oxygen by weight to form 9 pounds of gas by weight, and the process of combination gives off about 62,000 B. t. u.'s of heat. Similarly, one pound of carbon combines with 2.66 pounds of oxygen, forms 3.66 pounds of carbonic acid gas, and during the process gives off about 14,500 B. t. u.'s.

If carbon is not fully burnt—that is, if there is not sufficient air supplied to the carbon to consume it completely under certain conditions,

it is converted into carbonic oxide, and gives off about one-third of the amount of heat given off when it is completely burnt to carbonic acid.

The heat given off by the combustion of any ordinary fuel depends, therefore, on composition. In order to calculate the heat obtained from one pound of such fuel, having a given percentage composition, it is sufficiently near for practical purposes to determine the actual weight of carbon, free hydrogen and other constituents in one pound, and calculate the heat given off if each were burnt separately.

It is impossible to get any more heat out of any fuel than the latent chemical energy stored in it. This makes me think of when I was working in a shop a number of years ago, the boss claimed he had found a way to save fuel. His method was to place a coil of stove pipe wire in his stove. His theory being that the wire would become red hot from the fire and would continue to throw off heat after the fire had burned down, not seeming to know that he was simply transferring the heat from the fire to the wire, and

again from the wire to the fire. This belief still holds true with a large number of people who do not understand the principles of heat.

Transmission of Heat.

Heat is passed from a warmer body to a colder by three general methods, each of which is of considerable importance in connection with the methods of heating. These methods are radiation, conduction and convection. The heat which leaves a body by radiation travels directly and in a straight line until it is intercepted or absorbed by some other body. Radiant heat obeys the

same laws as light, its amount varying inversely as the square of the distance, and with the sine of the angle of inclination. Radiant heat passes through gases without affecting their temperature to any appreciable extent. When heat is applied to one end of a bar of metal, it is propagated through the substance of the bar, producing a rise in temperature, which gradually travels to the remote portions. This transmission of heat is called conduction. It differs from radiation, first in being gradual instead of instantaneous; second, in exhibiting no preference for traveling in straight lines—the propagation being as rapid through a crooked as a straight bar. In heating a body the heat is at first largely absorbed by the body without changing the temperature, then for a time it is applied in raising the temperature; the time required for this operation will depend upon its specific heat. After a time, the temperature of the body will remain constant, the heat being removed as rapidly as it reaches a given position, and, in this case, we have an illustration of the transmission of heat by conduction.

The amount of heat which passes is directly proportional to the area of cross section, to the difference of temperature divided by the thickness, and to a co-efficient which depends upon the character of the material. The co-efficient is the quantity of heat which flows in unit time, through cross-section of unit area, when the thickness of the plate is unity, and the difference of temperature is one degree.

It is only by such motion that liquids or gases can be heated any appreciable amount. The heating of the air of a room is practically all accomplished by currents, which bring the particles into contact with heated plates, radiators, etc. If the air enters a room at a higher temperature than by the reverse process, the heat is given up to the colder objects, and the air is lowered in temperature. The heating of air by a warm air furnace is due to circulation which brings the particles of air into direct contact with the highly

heated surfaces, so that the heating in that case is accomplished largely by conversion.

Any general consideration of a system of warming must include, first, the combustion of fuel, which may take place in a furnace or boiler; second, a system of transmission by means of which the heat shall be conveyed with as little loss as possible to the position where it can be utilized for heating, and, third, the

diffusion of heat so that it shall be conveyed to all parts of the building to be heated in the most economical way possible.

In the case of warm air heating, the air passed over the heated surfaces and then transmitted by pipes while at reasonably high temperatures, to the rooms where heat is required. The circulation being the difference in weight between the warm and cold air.

James Charles Allen Tells How He Insulates Warm Air Ducts Passing Through Vegetable Cellar.

System Installed by Serns & Stockman in 1918 Gives Satisfactory Service in Coldest Weather.

THIS is the third of a series of articles on difficult installations of the warm air heating system designed by James Charles Allen, heating engineer for the International Heater Company, Utica, New York, at Rockford, Illinois. The system described herein was installed by Serns & Stockman at the residence of Ed. Vincent on his melon farm just north of Milton Junction, Wisconsin.

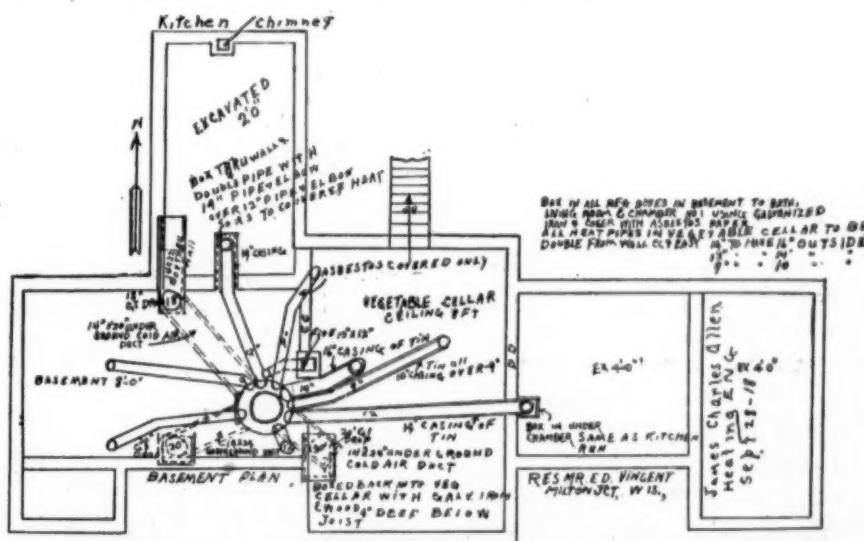
Mr. Allen's remarks are as follows:

Many times a heating engineer is brought face to face with a problem the requirements of which are such as to make him wish he were

in some other line of business.

The owner Mr. Vincent's orders were, "I want a warm air heating plant erected in the basement of this house, which measures 65 feet from east to west, in which the pipes running through the vegetable cellar will be insulated in such a way as to permit of no leaking of heat from them into the cellar."

The orders concerning the insulation of the pipes going through the vegetable cellar were carried out by putting a pipe one size larger over the outside of the warm air duct. This left an air space between the two pipes into which was packed mineral wool.



Basement Plan of the Vincent Installation Designed by James Charles Allen at Milton Junction, Wisconsin.

The unexcavated portions of the basement which required warm air ducts were treated in the same manner, using the next size larger register boxes and elbows. The ducts were then encased, so as to conserve as much heat as possible.

Note the duct running to chamber number 1. By actual measurement there was a loss of only 5 degrees in the temperature of the air from the time it left the furnace until it arrived at its final destination, chamber 1. This run is twenty feet, measured horizontally, but with a turn of the elbow register

constructed from cement, the walls being six inches thick, the floors three inches, and the top which is the basement floor was four inches, all floors reinforced with chicken wire. The walls and floor were trowled smooth. The top is supported on 20-gauge galvanized iron corrugated. Due to the shortness of the underground duct, I added only 10 per cent for horizontal run.

The bedroom, located directly over the living room and of the same size, was heated with a ceiling register. The bedroom to the east, marked "no heat," is warmed

Independence, Wisconsin, asked how a strictly pipeless furnace could be made more efficient. He asks if this furnace could be connected with a cold air pipe to get better results. He also wants to know how this could be done.

C. L. Thompson, 1220 South 9th Street, Terre Haute, Indiana, answers the inquiry as follows:

To AMERICAN ARTISAN:

Desiring to help a brother in distress, I hasten to answer the inquiry from the Torgerson Hardware Company in the issue of AMERICAN ARTISAN for October 4th.

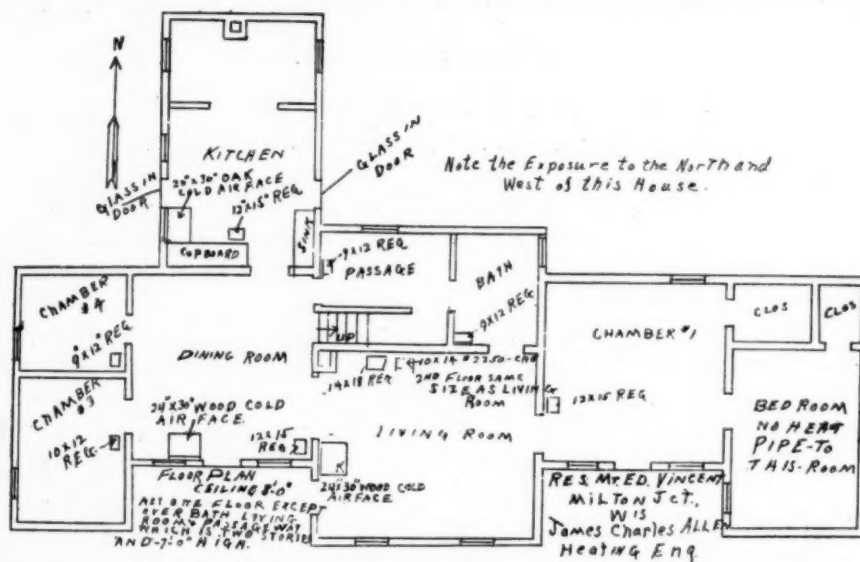
Jerk the inner casing out of the pipeless. Use the same register now above it for warm air only. Bring two cold air pipes to the base of the furnace, one on each side. These two pipes should be large enough to carry the same amount of return air as the free air capacity of the large register above the pipeless—one-third less than the square of the register.

These two cold air returns should be taken from different parts of the house—one especially from the north or northwest side.

Very truly yours,

C. L. THOMPSON.

Terre Haute, Indiana.



First Floor Sketch of the Vincent Installation Showing How the Heating Requirements of the Dining and Living Rooms and the Kitchen Are Met.

box collar and register box the actual air travel is twenty-two feet and three inches.

The run to the kitchen is doubled and boxed back to the furnace cellar in the same manner as that described heretofore. The cold air ducts in the unexcavated portions of the basement were also treated in this manner. I also made certain that there were no leaks that would tend to restrict the air flow from the rooms to which the returns were connected.

It was also found necessary in this installation to use underground ducts. But none of them were over fourteen inches deep. Experience has taught me that a gravity return duct placed deeper than fourteen inches does not circulate satisfactorily.

The cold air ducts were con-

to 5 and 6 degrees less than the temperature of chamber 1 by seepage from the chamber mentioned.

I also found it necessary to shorten the return ducts as much as possible; in fact, more than I had really wished.

This job was installed in 1918 and is meeting all of the requirements laid down by Mr. Vincent at the time the order was given; namely, no heat in the vegetable cellar. The remainder of the dwelling is heated to 70 degrees in the coldest winter weather.

Thompson Shows Torgerson Hardware How to Rearrange Pipeless.

On page 20 of the October 4th issue of AMERICAN ARTISAN the Torgerson Hardware Company, of

Frank Mahnken Believes in Taking Advantage of Opportunity.

Calling attention to the necessity of cleaning the furnace before winter sets in through advertising seems a little thing. It is a little thing, but a little thing in the right direction.

Coming into direct contact with potential customers is the object of every furnace installer. And one of the ways of doing is through the basement—not as a holdup artist, but as a purveyor of service.

Reputations for honesty and straight-forwardness in all dealings have their roots deeply embedded in the soil of honest service. The nutrition is there in sufficient quantities to support life.

Symbolic of this is the great oak tree which had its origin in the crevice of a rock, where a stray acorn had fallen and sprouted, finding enough nourishment in its seemingly barren and impregnable sur-

**NOW IS THE TIME
To Look After Your**

FURNACES

Call
FRANK (Jerry) MAHNKEN
Heating and Plumbing
Arcolas a Specialty
Auto Radiators Repaired
506 West 9th Street
Phone 985

Advertising Furnace Cleaning
Services.

face to enable it to grow and finally forcing the entire rock asunder.

It pays to advertise the little timely services. And Frank (Jerry) Mahnken has hit upon the proper attitude in the accompanying advertisement, taken from the *Beardstown, Illinois, Star*.

Western Warm Air Furnace Meeting December 4 and 5, Sherman House, Chicago.

The annual meeting of the Western Warm Air Furnace & Supply Association will be held at the Sherman Hotel, Chicago, Thursday and Friday, December 4 and 5.

It is noted that the Annual Live Stock Show will be held in Chicago during the same week that the Western Warm Air Furnace meeting takes place and, therefore, room reservations for the Sherman House meeting should be made without further delay, in order to insure accommodations.

Secretary Hussie also calls attention in his announcement to the members to the dedication of the Research Residence at Urbana, Illinois, December 2 and 3.

A ten dollar margin on a furnace installation usually turns into a loss.

Secretary Williams Issues Official Call for the Dedication of Warm Air Research Residence.

*Important Event Will Be One of Features of
Mid-Year Meeting of Furnace Manufacturers.*

THE following announcement is made by Allen W. Williams, Secretary of the National Warm Air Heating and Ventilating Association:

"The dedication of the Warm Air Heating Research Residence and our Midyear meeting will take place at Urbana, Illinois, December 2 and 3, 1924.

"This meeting will afford you a splendid opportunity to inspect the completed and fully equipped Research Residence, tie into its activities and profit from the money you have invested in this remarkable house.

"The program at our business sessions includes a particularly interesting report on the Research Work since our April convention.

"Not only should the executives of your company be present, but your furnace department manager, heating engineer, advertising manager, sales manager and superintendent as well.

"A special invitation is also extended to the ladies. By all means bring them with you. Entertainment will be provided for them.

"Our headquarters will be in the Urbana-Lincoln Hotel, Urbana, but equally comfortable and convenient accommodations may be secured in the Inman Hotel at Champaign. Both modern and fireproof. Champaign and Urbana are practically one city.

"In view of the large attendance, early reservations should be made.

Hotel Rates.

"Urbana-Lincoln in Urbana:

"Single, without bath, \$1.75, \$2.00.

"Single, with bath, \$2.50, \$3.00, \$3.50.

"Double, without bath, \$2.50, \$3.00, \$3.50.

"Double, with bath, \$4.00, \$5.00, \$6.00.

"Inman Hotel in Champaign:

"Single, without bath, \$1.75, \$2.00.

"Single with bath, \$2.50, \$3.00, \$3.25.

"Double, without bath, \$3.50.

"Double, with bath, \$4.50, \$5.50, \$6.00."

T. W. Torr Shows How to Construct Return Air Pipe Shoes.

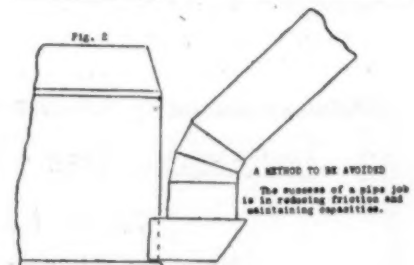
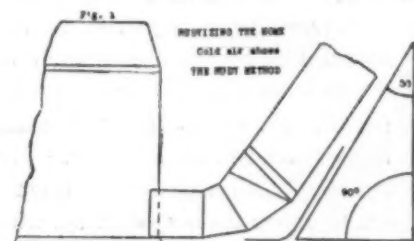
This is the fourth of a series of articles, entitled, "Rudyizing the Home," now being written by T. W. Torr, heating engineer for the Rudy Furnace Company, Dowagiac, Michigan.

The subject matter of this article deals with the correct and incorrect way of constructing shoes for connecting the return air pipes with the casing.

The article follows:

Rudyizing the Home.

"There are several ways of constructing good shoes for connecting the return air pipes with the casing,



any one of which will produce satisfactory results. The Rudy method, Figure 1, shows a connection that permits the air to flow into the casing with little friction. The shoe should be low, with a good sweep

around the casing. It is strongly recommended that this principle be followed.

"The method, illustrated by Figure 2, should by all means be avoided. The abrupt turn the air must make to start up through the casing cuts down both the velocity and capacity. Many times this practice means the difference between satisfaction and dissatisfaction.

"Seldom do we connect the round pipe direct to the casing, unless a very small pipe (not over 12 inches) is used.

"It may be argued that a pipeless furnace compels the air to turn abruptly, yet it delivers heat. The pipeless furnace has no friction in warm air pipes to contend with. If it had the abrupt turn would be a serious handicap.

"The round pipe from the top of the duct to the shoe, should have a slope of at least 30 degrees, see illustration. Do not bring the round pipe straight down. In other words, in changing the direction of the air in the return air duct, avoid doing it with a sharp 90-degree turn."

An Attractive Use of the Imperative Form of Headline.

The imperative form of advertisement head writing is considered by advertisement specialists to be the best method to use when the sentence is completed—that is, when the reason for making the command is also included in the sentence. The command when standing alone is apt to produce the very effect which the merchant is trying to avoid.

In the advertisement of the LaGrange Hardware Company, taken

from the LaGrange, Illinois, *Citizen*, the headline sentence is completed; that is, it gives the reason why in addition to making the command to do a certain thing. "Install the Weir Furnace for Healthful Heat." That sentence starts a train of thought in the reader's mind. It is enough to compel him to write a letter for further information on the healthful heat proposition. His curiosity has been aroused and he wants it satisfied.

This advertisement in itself tells nothing about the advantage of a warm air furnace. What it does or is designed to do is to arouse interest sufficient to compel the reader to write for further information. Then the store sends out or makes a special call with full information on the warm air heating system.

For the latter purpose the advertisement is well designed.

Profitable Use of Small Newspaper Space.

Most retail advertisers use small space; that is, their advertisements rarely exceed four to eight inches in depth and two or three columns wide. It really requires more skill to get satisfactory returns out of small space for a small store than to make large space profitable for a large store. Large advertisements attract the reader simply by their size and by the variety of articles offered for sale. But in writing small advertisements the ad writer is restricted by lack of space and must get the very best value out of a few words, small illustrations and small display type.

The best plan when using small space in a newspaper is to specialize

on one article or on one line of articles in each advertisement. If several papers are used each day, then several articles or several different lines may be advertised each day. The advertiser should exercise his best judgment in selecting the articles to be advertised, using only such as are very desirable, because of style or price, or some other selling point. These leaders will draw the people to the store and give the clerks an opportunity to sell them a variety of articles. It is a mistake to attempt to run a department store style of advertisement in space only large enough to present a few articles properly.

Special position is of more value with small space than with large space. A large advertisement will be seen wherever it is placed, but the small advertisement must be favored. Use attention getting headlines, have the body of the advertisement set in the most attractive manner possible, and use cuts of items featured wherever you can. Manufacturers will usually supply them to you gratis.

What Constitutes an Unfair Method of Competition.

The Federal Trade Commission recently cited a New York cigar manufacturer for using the word "Havana" in connection with the advertising and sale of cigars not made wholly of pure Havana tobacco.

There are unfortunately too many merchants in all lines of business who find it profitable to ride to success on some one else's smoke.

The merchant who engages in this practice is an abominable, despicable scoundrel with no moral principles and utterly destitute of business ethics.

The sooner we learn to be truthful in our business dealings and advertising the sooner will we find business placed upon a higher plane.

Attempting to ride to fame in another man's chariot is bound to prove a stone around his neck too weighty to be dragged along.

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FOR HEALTHFUL HEAT

Examine our heating plans and get our figures. We do all kinds of GUTTER WORK, TIN ROOFING and REPAIRS. Prompt, reliable service at a price you can AFFORD to pay.

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Phone 26 Fifth & Harris Aves.

Furnace Advertisement Appearing in La Grange, Illinois, *Citizen*.

Thomas Brophy Reveals Many Actual and Proposed Uses of Copper to Brooklyn Rotarians.

Shows How and Where Copper and Brass Is Serving the Public to a Greater Extent Each Year.

MAN first began to use metal—copper—perhaps 10,000 years ago.

The fragments of history left to us by primitive man are fragments of copper. His copper hatchets, his knives, his spear heads and his few rude copper appliances for toil and for comfort tell us all that is known of that evolutionary period of civilization.

Bronze, which is a copper alloy, added later chapters to unwritten history. Then with mention of Tubal Cain, comes written record of an artificer in brass, another alloy of copper.

Modern exploration into the remnants of ancient civilization discloses that copper and its alloys were closely linked with the daily life and progress of the dim ages. Speaking in terms of copper, it can be said that there is nothing new under the sun. A bit of copper pipe plumbing has been discovered in Egyptian ruins that date back 5,400 years. Archaeologists have also found in Egypt pictures of crude furnaces and bellows which reveal ancient methods of copper smelting.

We know that Goliath went to battle encased in armor of shining brass and that the entrance to Solomon's temple was flanked by pillars of brass.

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The old age of bronze is a tradition. The new age of copper and its alloys is a reality. Without cop-

per or an efficient substitute—and none has been discovered—our modern civilization would falter. Copper permeates all modern progress—the electric light, the telephone, the radio.

The varied uses made of copper and its alloys range all the way from the humble pin in the dressmaker's sewing basket to the 20-ton bronze propellers that drive the Leviathan.

In this article Mr. Brophy has, figuratively speaking, taken the multiplicity of uses for copper and brass, piled them all into a compact form and then with a sharp knife cut down through the center of the ball thus formed. In this way he has tried to give a cross-section of the services being rendered by copper and brass at the present time, as well as revealing many other possible and probable uses for these metals now under consideration in the United States.

The address was given before the members of the Brooklyn, New York, Rotary Club.

One fabricating company alone manufactures 35,000 different articles of brass used for everyday requirements.

There is scarcely a basic industry that is not reliant in greater or less degree upon the services of copper or its alloys. The extent to which industry depends upon copper is indicated by a world production of over 2,800,000,000 pounds in 1923.

More than three-fifths of the world's output of copper is applied to uses of the electrical field. It is, in fact, impossible to imagine electrical industries attaining their present magnitude without copper.

In the telephone and telegraph systems of the United States alone more than 800,000,000 pounds of copper is already employed.

Should you telephone from Brooklyn to San Francisco, the span of wire that makes your voice audible at the other side of the continent represents 3,000,000 pounds of copper.

The world's telegraph and telephone systems have already consumed 1,300,000,000 pounds of copper and are now using it at the rate of 200,000,000 pounds additional each year. The world also is girdled by 20,000,000 pounds of copper in submarine cables.

Into our American street railway systems has gone 675,000,000 pounds. A ten-car subway train alone contains about 40,000 pounds of copper, an ordinary street car 2,500 pounds.

You think of a steam locomotive as the iron horse, but 3,000 pounds of copper have entered into its construction. And about 100,000,000 pounds goes annually into such obscure places as the journal boxes of railroad freight and passenger cars in the shape of bearings.

Your safety when traveling illustrates another phase of copper in railroading. As the train thunders on there is a man at the throttle responsive to signals operated by the flow of electricity over copper wire. How extensively copper is used in that service may be gauged from a typical automatic signal system on eight miles of track near New York which requires 1,300,000 feet of copper wire for its operation.

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operation. Steam railroads here and there are being electrified. That takes as much as 35,000 pounds of copper per mile of road.

An era of hydraulic power development has dawned. Vast water power schemes are projected, some are already being realized. The distribution of power from operating plants calls for more and more copper wire. Although considerable water power development has been effected, the harnessing of water for production of power is only in its infant stage here; yet one company—the Montana Power Company—requires more than 3,000 miles of copper wire for its distribution of electrical energy. From this can be estimated the enormous consumption of copper that will follow when the country is studded with central plants radiating power to all points of the compass.

Outside appearance would not lead you to suspect that the automobile is a large consumer of copper. However, there are 25 places in the average car where copper in some form or other is used. One day's output of Fords at the Highland Park plant alone requires 254 miles of copper tubing for radiators and 67 tons of brass for various parts and appliances.

The automobile industry consumes more than 150,000,000 pounds of copper annually. In New York bronze traffic towers on Fifth Avenue and copper signal boxes on Broadway are forerunners of automobile traffic control systems that may be universally employed, adding to the poundage of copper consumed.

In marine service copper is indispensable. The pride of America's merchant marine—the Leviathan—contains more than 1,000,000 pounds of copper and copper bearing metals. Thousands of brass tubes are used to condense the steam used by its huge engines. Oil, water and air pass through miles of brass and copper piping on the ship. Its huge searchlights are brass, and its galleys shine with copper utensils.

But a modern super-dreadnaught

surpasses even the merchant liners in the use of copper. It contains upwards of 2,000,000 pounds.

The great chemical industry is another large consumer of copper. Steam kettles, pipes, valves and vats are among the appliances of chemistry made of copper. Corrosion is a chief hazard in the industry and only copper and its alloys will withstand the corrosive attacks of chemical products in course of manufacture. Sugar refineries, paper mills, dye works, drug and food product manufacture all depend on copper for efficiency in production.

For every ton of coal mined in this country today eleven tons of mine water are pumped. Mine pumping is necessarily continuous and requires the use in pumps of metals that will not be eaten away by acid water. Bronze pumps and bronze fitted pumping equipment are standard for coal mining service. They keep the water moving out and your coal supply is steadily maintained in consequence.

Copper, brass and bronze are widely used in the textile industry. In the bleaching, dyeing and finishing of textile drip pans, printing rolls, mercerizing frames and other appliances used are subject to corrosion. They must be made of non-ferrous metal because other metals will not serve long.

Copper was the first metal used for roofing purposes and copper roofs hundreds of years old are today protecting historic structures in various parts of the world. Copper for roofing and spouting, brass for plumbing pipe, and brass and bronze for hardware and lighting fixtures are having a vogue which demonstrates wide public recognition of the lasting quality and economy of copper and its alloys.

Notable new buildings in New York and other cities are copper, brass and bronze equipped to a surprising degree. The new Federal Reserve building here has, for example, 1,100 bronze framed windows. The new Bowery Savings bank building is a show place of bronze art work in doors, windows and banking room equipment. The

same is true of the recently erected Greenwich bank building, while New York's newest apartment house, 277 Park avenue, contains 100,000 pounds of brass piping and more than 60,000 pounds of copper was used there for roof protective purposes. Grand Central station contains 2,718,000 pounds of copper, brass and bronze, and the Equitable building has a total of nearly 2,000,000 pounds.

These are but a few illustrations of the growing indispensability of copper in the construction industry which last year consumed 225,000,000 pounds of copper.

It is interesting to know that the practice of surgery is aided largely by instruments and appliances made of copper. Many thousands of pounds of the metal are used annually in the manufacture of these instruments. Modern medicine, too, relies on copper for some of its remedies. It makes use of copper acetate in diseases of the skin and copper sulphate as an emetic, to specify but a few medicinal uses.

It has been said that man's greatest fight is his present warfare with the insect world. Scientists have been awakening us to the fact that the human race is in a struggle for existence with countless legions of flying creatures. These insect enemies destroy our food, spoil our crops, kill our trees and even invade our tissues and produce disease.

Our most deadly poisons must be drafted into warfare against them if mankind is to win the struggle. Copper provides many of the most effective insecticides. Paris green and the Bordeaux mixture are familiar chemical friends of the farmer and utilize copper salts. Arsenic used as insecticide is obtained in the process of smelting copper.

Copper sulphate kills the algae, the vegetable growth that at times makes the city's water supply so unpalatable. Another copper salt is used by deep sea fishermen to impregnate nets and prevent their destruction by marine pests. Copper aids there in the winning of a valuable food supply.

The average individual carries

more copper on his person than he is perhaps aware of.

The fact is that the average consumption of copper in the United States is almost 15 pounds per year for each man, woman and child of the population. This average, of course, includes the poundage that goes into the various industries. The United States is the greatest copper using country in the world. About 1,500,000,000 pounds or more than half of the world's total production was consumed in this country last year.

The recent great increase in the use of copper and its alloys in this country may be attributed largely to the work of the Copper and Brass Research Association.

The association at present embraces twenty-four copper mining companies and fourteen rolling mill or so-called fabricating companies. These constitute about 90 per cent of the copper mining industry and about the same percentage of the fabricating industry. In addition there are a number of merchant distributors in the association ranks who have done much on their own account to further the work the association has in hand.

The activities of the Copper and Brass Research Association may be summed up as follows: Educational publicity through paid advertising, literature, etc., technical and commercial research, merchandising dealer coöperation, good will among the trades and professions having a direct influence on the consumption of copper, brass and bronze and the maintenance of a service bureau to which any user or prospective user of our metals may bring his problems.

The association as such neither buys nor sells anything. It operates in every possible way to stimulate competition among its members. It does not consider price problems, although the increased consumption that has been brought about would naturally operate to affect these. It makes no trespass into the individual affairs of its member companies, does not officially gather or distribute statistics of either pro-

duction or consumption and keeps all of its activities well within the provisions of the federal statutes.

Advertising of the association has appeared in the newspapers of the country, in such national media as the Saturday Evening Post, the Literary Digest, Collier's Magazine, House and Garden and other periodicals, and in the trade, technical and professional press. In all of this advertising, which has now covered a period of almost three years, we have stressed the superiority of copper, brass and bronze as commercial metals and the ultimate saving involved in their uses. Always we have confined our recommendations for the use of our metals to those fields in which they manifestly are the fittest and in the end, the most economical.

In the main this promotional work has had to do with copper in roofing, flashings, conductor pipe and other forms of building construction, brass for both hot and cold water lines, brass and bronze in hardware, copper, brass and bronze in automobile construction, copper in water heaters, washing machines and myriads of other small articles where freedom from rust is important.

The reactions from all of this work have been most favorable. Our metals now have thousands of friends who count, in quarters where a few years ago they were regarded either with actual hostility or at least indifference. Copper consumption in the United States has during the past two years been greater than ever before in the history of the industry, and with the resumption of favorable conditions abroad there is every prospect of excellent times ahead.

Much of our association's research is, of course, designed to find new uses for copper and copper products, and we have at the present time some interesting and important experiments under way. In Europe, in South America and in the Orient locomotives as a general thing are equipped with copper fire boxes and copper boiler tubes. American locomotives use steel, which we believe to be inferior for

the purpose. For several months now the Northern Pacific Railway, working in coöperation with our association, has had a copper equipped locomotive in heavy freight service and the most exhaustive tests are being made. An exactly similar locomotive with steel equipment is being used in exactly similar service, so that accurate comparative data may be obtained. If the copper gives the service we think it will, and the tests so far have been most encouraging, here is an enormous field for an increased consumption of this metal.

Working in conjunction with the United States Government, the National Research Council and other bodies, our association has been experimenting for more than a year on copper as a protection for marine piling against the raids of the teredo, or marine borer. The losses which this salt water worm causes in piling runs into many millions of dollars a year and if copper proves the proper antidote for this evil, as now seems likely, here is another field of consumption which at the moment is almost incalculable.

It is evident from the results achieved in the copper industry that a trade association can be of benefit to the industry it represents and at the same time be of service to the general public.

Georgia Sheet Metal Men Select Biltmore Hotel, Atlanta, for National Convention Headquarters.

The general committee of the Sheet Metal Contractors' Association of Georgia has been active with the preparation for the reception of the National Sheet Metal Contractors when they meet in convention at Atlanta in June, 1925.

The committee has selected the Biltmore Hotel as official headquarters. The committee also advises that the rates at the Biltmore are very reasonable.

Other matters pertaining to the convention are progressing in a satisfactory manner.

Nickel Zinc Can Be Used Effectively in Making Various Kinds of Ornamental Spheres.

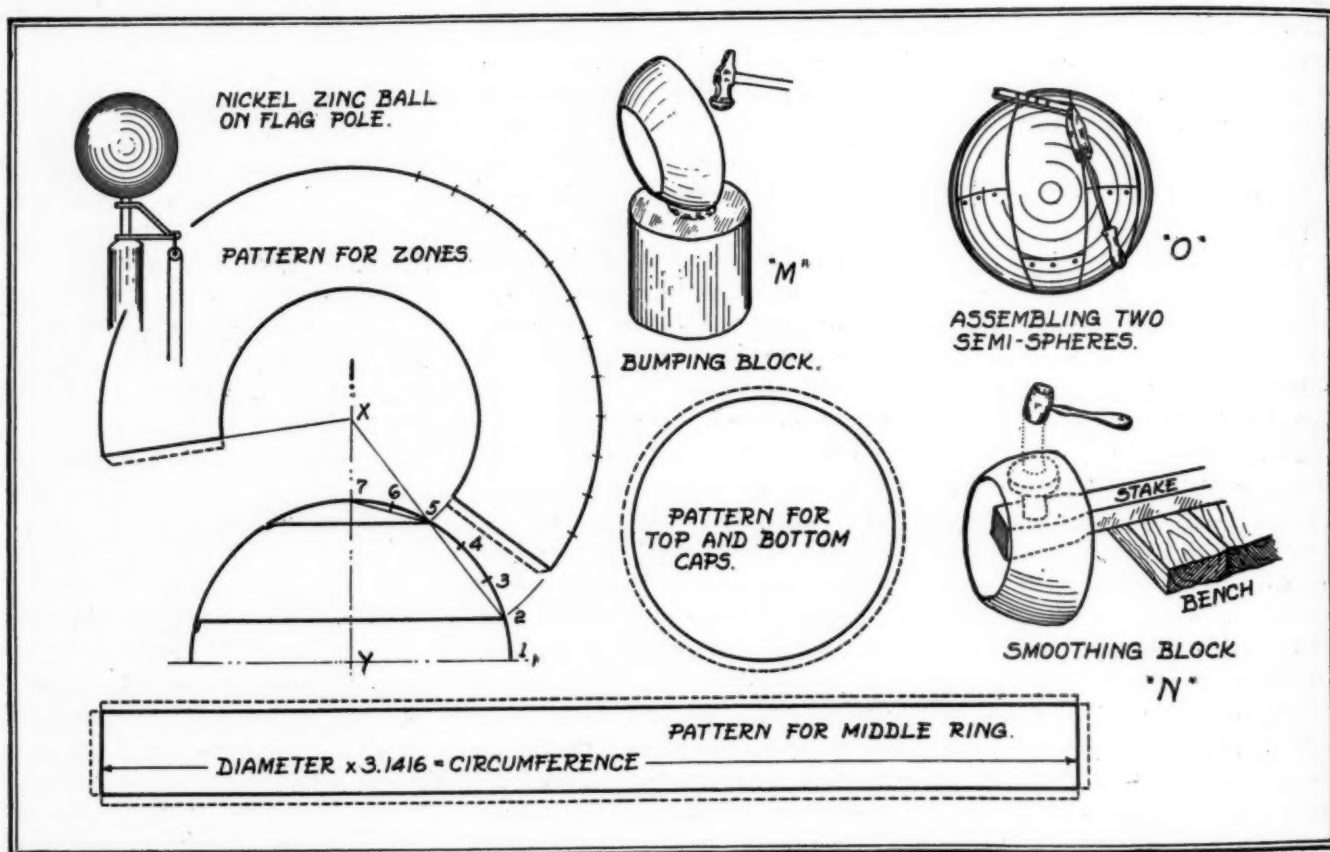
Kothe Shows How Flag Pole and Other Ornaments Can Be Made With Little Effort.

IN EXTERIOR ornamental work the sphere is quite popular. It always looks well and is comparatively easy to make. These spheres are used on finials of building, on flag poles, and as cupola ornaments. In this case we use the sphere for a flag pole ornament, and to be made of nickel zinc, in order to glisten in the sun. For such work the finished sphere is generally lacquered

the end of a pipe, giving it some reinforcement on the inside to resist strong winds. Our sketch shows the external arrangement with swivel attached; this swivel is made of flat bar iron of a suitable width to make a pivot around the pipe. A pulley is hooked on the end of swivel on which the flag is raised or lowered.

In laying out the sphere, the zone

First draw a horizontal and a vertical center line, and from Y describe the half of sphere. Then divide one quadrant into say six equal spaces, and the worker's experience will tell him how much he can handle in each zone. Without experience, you can follow the general scheme of our drawing—that is, allow two spaces for the middle ring, which will be a straight belt, and



Pattern Showing Construction of Sphere.

and dressed by polishing, so a perfectly keen finish is retained.

The writer helped make one of these zinc spheres over 20 years ago, which was lacquered and varnished several times and has never been touched to this day, and is still in good shape. Where nickel zinc is used the luster should be maintained by this means a long period of years.

Flag pole spheres are soldered to

method is preferred, since this method is easier, quicker and makes a more workmanlike job of it. The length of the zones are made to such a size that a person can conveniently handle for bumping purposes. In general a sphere made in five parts, one central band, two zones and two dished caps, is the most satisfactory way of doing this work.

bumped to the given curvature. For the zone, three spaces are allowed, while for the cap two spaces as radius, or four spaces as diameter.

Now the radius line z-x is drawn as the workman has found the metal works best. Thus, if he wishes to bump the radius out from the edges, then he will draw the radius through 2-5 to the vertical center x. But if he figures on compressing the edges,

and only bumping out the central portion as the segment 3-4 would produce, then he will draw the radius line through points 3-4 to the vertical center line. This is, no doubt, the easiest way, since in the bumping process there always is some compression along the edges. Or again, if all the zone arc were put in compression, the radius line would be drawn tangent to arc 3-4. In each case a different radii would result; but the hammering or bumping process will make up the difference—that is, the workman must know how to treat the metal to either shrink it or stretch it.

In this case we use points 2-5 for drawing the radius line. So from x we describe the two arcs, in this case from points 2-5, because during the bumping process the metal will stretch to make up for the arc. But in close work the curve 2-3-4-5 must be measured off on each side of center on the radius line, so the correct girth will be maintained. On this outer curve lay off the spaces from our elevation as 1-2-3-4, etc., making 24 spaces for the complete girth. By drawing lines to x, the inside girth is also measured to correspond to the outside girth.

The middle sing is made equal to twice the width of space 1-2, and the girth can be stepped off from elevation spaces, or figured and measured as shown. While the cap is described with radius 5-7 and is then bumped into shape.

Drawings "M"—"N"—"O" show the bumping and smoothing and assembling process. The zones and caps are clamped together so both similar pieces can be hammered out during the one operation. A hollow is gouged out of a block and smoothened nicely by taps with the raising hammer, and after the work is bumped out—the pieces are separated, and put on the smoothing stake. This is nothing but a round or oval-faced stake having the approximate curvature of the sphere, and with a smooth mallet all bumps and wrinkles are smoothened out. After this the cap is soldered on each zone, and the work is rounded out again somewhat, and after this

the two semi-spheres are fitted together and soldered as at "O". The solder should be sweated in the seams and not just skinned along the edges.

These spheres have considerable expansion and contraction in all directions, and if the laps are not soldered well, they may crack. Then, too, all laps should be made to shed the water, so if cracks do occur, the lap edges will shed the water. Experience is about the only guide to such work and workmen who want to improve their ability should do more experimenting, even though it is with scrap metal.

Committees Named to Simplify Sheet Metal Ware Catalog.

Initial steps have been taken by the sheet metal ware industry to secure the coöperation of the Division of Simplified Practice in reducing the number of varieties cataloged in the production of that industry.

At a recent meeting in Buffalo three committees were named, one for enameled ware, one for tin ware, and one for black iron and galvanized ware. Members of these committees have been asked by Warren S. Smith, secretary of the association, to submit their suggestions as a preliminary to further steps.

The committees comprise the following:

Enameled Ware: W. Topping, chairman, Columbian Enameling and Stamping Company, Terre Haute, Indiana; R. M. Fawcett, Republic Stamping and Enameling Company, Canton, Ohio; Alfred J. Kieckhefer, National Enameling and Stamping Company, Milwaukee, Wisconsin; F. S. Morris, The Vollrath Company, Sheboygan, Wisconsin, and J. M. Sanders, U. S. Stamping Company, Moundsville, West Virginia.

Tin Ware: Edw. M. Blake, chairman, Central Stamping Company, New York city; Sidney Detmers, Republic Metalware Company, Buffalo, New York; M. J. Dowling, Atlantic Stamping Company, Rochester, New York; Thomas W. Gulley, National Enameling

and Stamping Company, Baltimore, Maryland, and Henry G. Kuck of Stuber & Kuck Company, of Peoria, Illinois.

Black Iron and Galvanized Ware: Fenton Lawson, chairman, F. H. Lawson Company, of Cincinnati, Ohio; Sidney Detmers, Republic Metalware Company, Buffalo, New York; J. O. Entekin, Wheeling Corrugating Company, Wheeling, West Virginia; T. W. Gulley, National Enameling and Stamping Company, Baltimore, and George M. Schott, of the Cincinnati Galvanizing Company, Cincinnati, Ohio.

Detroit Sheet Metalers Hold Monthly Meeting October 13th.

The regular monthly meeting of the Detroit Sheet Metal and Roofing Contractors' Association was held Monday evening, October 13th, at the Elks Club.

Following a splendid chicken dinner, the meeting was called to order by President Wallace Candler. The report of the Secretary-Treasurer Marshall was then read which showed the organization to be in a good financial condition.

The State Secretary, F. E. Ederle, was present and made a few suggestions concerning the 1925 state convention which is to be held in Detroit in February. While no definite action was taken concerning the entertainment of the delegates, a full discussion was held and it is quite certain that Detroit proposes to give the Michigan members the best convention in the history of the organization. President Candler stated that he would announce his committees some time this coming week.

The Detroit organization through its active secretary, Mr. Marshall, is certainly making decided progress along the lines of securing better co-operation and causing a general uplift of the sheet metal industry in the city of Detroit.

Showing the merchant how to get more rapid and complete turnovers is synonymous with telling him how to make more profit on your goods.

Sheet Steel Makers, Users and Distributors Fix Schedule of Reduction in Sizes and Gauges.

At the Atlantic City Convention the Sheet Steel Simplification Committee Recommends Reduction in Sizes from 1819 to 261.

ONE of the most important actions affecting American industry generally was the conference at Atlantic City, this week, of manufacturers, distributors and consumers of sheet steel, at which recommendations were presented for the reduction of gauges and sizes of sheet steel from 1819 to 261, the latter number to represent the "regular" sizes, and any other sizes to be made on special order only.

The conference was conducted under the auspices of the Division of Simplified Practice, which was represented by A. E. Foote. The division, in coöperation with a simplification committee of the sheet steel industry, headed by Walter C. Carroll, vice-president of the Inland Steel Company, has been working on the problem of excess sizes and gauges since the matter was brought before a meeting of the metal branch of the National Hardware Association in Cleveland, in 1923. The recommendations were based on surveys of the sale output of all the sheet steel mills for the last six months of 1922, and the tentative schedule has been submitted to each of the mills.

Some three hundred invitations were sent out by the division to technical bodies, manufacturers, representatives of many industries using sheet steel, and to trade associations and other groups having a direct interest in the proposed reductions.

The conference was called to order by the chairman, Major A. E. Foote, of the Division of Simplified Practice, Department of Commerce, Washington, D. C.

Major Foote explained that the conference was for the purpose of considering proposed eliminations in the manufacture of sheet steel, eaves trough, conductor pipe and Terne plate.

Major Foote introduced W. C.

Carroll of the Inland Steel Company, Chairman of the Sheet Steel Simplification Committee of the National Hardware Association, as having had charge of a survey that was made, looking towards the elimination of certain sizes of galvanized flat sheets, one pass cold rolled annealed sheets and blue annealed sheets.

Mr. Carroll said that the survey included 34 manufacturers and it was found that there were 1,819 items of different gauges and sizes in really three products, namely, galvanized flat sheets, one pass cold rolled box annealed sheets and blue annealed sheets. He said that during the last six months of the survey, which were the last six months of 1922, which was a representative period, on 434 items of one pass cold rolled and box annealed sheets they found that 72 per cent of the total tonnage bought by distributors in that period was in 10 per cent of the items; that they found in blue annealed on 535 items 70 per cent of the total tonnage bought was in 10 per cent of the items; that in galvanized it was a little different by reason of the new measurements they took, 71 per cent was in 110 items out of 673; that in galvanized roofing 97 per cent was in 38 items out of 142, and in painted roofing 80 per cent was in six items.

Mr. Carroll said they had had 100 per cent co-operation in their work on the part of the manufacturers.

On motion the conference adopted the recommendations submitted.

The conference almost unanimously agreed on the elimination of anything lighter than 28 gauge, full weight and painted galvanized roofing.

Conductor Pipes and Down Spouts.

The conference took up the consideration of proposed eliminations in conductor pipe as proposed in the communication from Mr. R. L. McHale, sales manager of David Lup-

ton's Sons Company, Philadelphia, which was as follows:

"At the present time conductor pipe is made in the following sizes:

"Plain round: 1½, 2, 2½, 3, 3½, 4, 5 and 6 inches.

"Round corrugated: 2, 3, 4, 5 and 6 inches.

"Square corrugated: 2, 3, 4 and 5 inches.

"The manufacturers of this particular product are endeavoring the elimination of 2½ and 3½-inch plain round conductor pipe. There is no need of its manufacture, the use of same only being a substitution for a more ample size.

"Eaves trough at the present time is made in the following sizes: 3, 3½, 4, 4½, 5, 6, 7 and 8 inches. It is proposed to eliminate 3 and 4½-inch, as they serve no real purpose, being substituted for a more ample size.

"The elimination of these sizes of conductor pipe and eaves trough with the fittings that go with them will be a considerable saving to the manufacturers, to the distributors and to the ultimate consumer.

"It has also been recommended that manufacturers of conductor pipe elbows eliminate the Number 0 angle—a 30-degree angle—for the same reason as expressed for the above commodities. It serves no real purpose."

After considerable discussion the recommendations proposed in this communication were adopted by the conference.

After discussion it was also agreed by the conference that it would recommend that all elbows, shoes, miters and all accessories, including ridge rolls, gutters, valleys, etc., be 28-gauge, full weight; 27-gauge to be eliminated.

It was understood that these eliminations would not go into effect for a period of six months so as to give time to dealers to unload their stocks of present sizes.

As Major Foote explained that these changes would not be put into effect until they were agreed upon by various groups of manufacturers, distributors and consumers.

At the conclusion of Mr. Carroll's remarks, Major Foote dis-

Simplification of Sizes for Steel Sheets Proposed by Simplification Committee.
Galvanized Flat Sheets.

Gauge.	48x 96	48x120											
12	28x120	30x 96	30x120	36x 96	36x120	48x 96	48x120						
14	24x 96	28x120	30x 96	30x120	36x 96	36x120	48x 96	48x120					
16	24x 96	24x120	*26x 96	28x 96	28x120	30x 96	30x120	36x 96	36x120	48x120			
18	24x 96	24x120	*26x 96	28x 96	28x120	30x 96	30x120	36x 96	36x120	48x 96	48x120		
20	24x 96	24x120	*26x 96	*28x 96	28x120	30x 96	30x120	36x 96	36x120				
22	24x 96	*24x120	*26x 96	*26x120	28x 96	28x120	30x 96	30x120	36x 96	36x120			
24	24x 96	*24x120	*26x 96	*26x120	*28x 84	28x 96	28x120	30x 96	30x120	36x 96	36x120		
26	24x 96	*24x120	*26x 96	*26x120	*28x 84	28x 96	28x120	30x 96	30x120	36x 96	36x120		
28	24x 96	*24x120	*26x 96	*26x120	*28x 84	28x 96	28x120	30x 96	30x120	36x 96	36x120		
29	*24x120	26x 96	*26x120	*28x 84	28x 96	28x120	30x 96	30x120	36x 96	36x120			
30	24x 96	*26x 96	28x120	30x 96	30x120	36x 96							

One Pass Cold Rolled Box Annealed Sheets.

18	24x 96	28x 96	30x 96										
20	24x 96	28x 96	†28x108	30x 96	30x120	36x 96	36x120	48x120					
22	24x 96	28x 96	†28x108	30x 96	30x120	36x 96	36x120	36x120	48x120				
24	24x 96	24x101	28x 96	†28x108	30x 96	30x120	36x 96	36x120					
26	24x 96	24x101	30x 96	30x120	36x 96	36x120							
28	24x 96	24x101	30x 96	36x 96									
29	24x101	30x 96	30x120	36x 96									
30	30x 96												

Blue Annealed Sheets.

8	†48x240	†60x240											
10	24x 96	30x 96	30x120	36x 96	36x120	*36x144	48x120	†36x168	†48x156	†60x156			
12	24x 96	30x 96	30x120	36x 96	36x120	*36x144	48x120						
14	30x 96	30x120	36x 96	36x120	*36x144	48x120	†60x120						
16	24x 96	30x 96	30x120	36x 96	36x120	*26x144	48x120						
10	42x 96	48x 96	†72x 96	†72x120	†72x144	†72x156	60x 96	60x120	48x144	60x144			
12	42x 96	48x 96	42x120	60x 96	60x120	48x144	60x144						
14	42x 96	48x 96	42x120	48x144									
16	42x 96	48x 96	42x120	48x144									

Corrugated Roofing and Siding.

GALVANIZED—Present standard widths and corrugations—in even foot lengths 5'-0" to 12'-0" in 29 gauge and heavier, **EVEN GAUGES.**

PAINTED—Present standard widths and corrugations—in even foot lengths 5'-0" to 12'-0" in 28 gauge and heavier, **EVEN GAUGES.**

Roofing—(All Other Styles and Patterns).

GALVANIZED—Present standard styles and patterns in 29 gauge and heavier, **EVEN GAUGES.**

PAINTED—Present standard styles and patterns in 28 gauge and heavier, **EVEN GAUGES.**

*Two sheet mills recommend item thus marked be eliminated. (Total 22 items.)

†Two other sheet mills recommend items thus marked be added. (Total 13 items.)

tributed the above proposed simplification of sizes.

Terne Plate Simplification.

In regard to Terne plates, the Simplification Committee recommended a reduction of 25 per cent in Terne plate variety, and also the following:

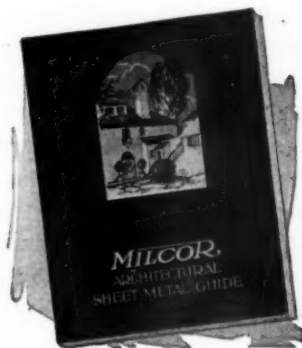
"The Terne Plate Simplification Committee of the National Hardware Association, named at a meeting held in Cleveland in June, 1923, has completed a study and has prepared recommendations for the elimination of 12-pound and 35-pound coated Terne plates and the retention of six other weights.

"The report points out that of the coating eliminated, the 12-pound weight represented but 8½ per cent of the 1923 tonnage, and that the 35-pound weight but one-half of 1 per cent of the 1923 tonnage."

Put away your advertising shot gun and get out the rifle—direct your advertising at a market and not broadcast.

**"The Milcor Guide"—a
Valuable Data Book
—Now Ready.**

There is a surprise in store for all who write for the latest Milcor Data Book—"The Milcor Architectural Sheet Metal Guide." You will find it one of the most hand-



Illustrating Milcor Guide.

some and helpful catalogs produced in the sheet metal industry—three colors on the cover, five colors inside—really a masterpiece.

It is full of valuable working

data for general contractors, carpenters, sheet metal contractors and dealers as well as for architects.

As you page through "The Milcor Guide" you undoubtedly will be impressed most by the joyous color effects which are attainable in such practical manner with Milcor art metal roofs.

And you will realize that here are 64 pages full of the most practical and valuable data you ever have seen compiled along this line—well worth keeping for frequent reference.

There is no charge for this book to architects, contractors, carpenters, sheet metal workers, hardware or building supply dealers, but it is being sent only on request, so if you want a copy, write to Milwaukee Corrugating Company, Milwaukee, Wisconsin. A handy coupon will be found for this purpose in the company's advertisement in this issue.

One ad never made anybody rich.

Harry Frey Gets Into Another Mess Over the Area of An Apple-Shaped Figure.

Places no Restrictions on the Mathematical Sharks Who Will Be So Bold as to Help Him Out.

THE heartless Harry Frye has been revolving the various onslaughts from brother readers of AMERICAN ARTISAN over in his mind.

We finally brought him to a realization of his cruelty to the starving tank man.

Now, however, he comes back with another problem.

His letter follows:

TO AMERICAN ARTISAN:

In this neck of the woods there is an old saying about never starting a thing you cannot stop. I have endeavored again and again to stop those circles of mine from rolling and would have succeeded a long time ago had not those good argus-eyed critics who occasionally write for AMERICAN ARTISAN started them rolling again. They have rolled my circles this way and that until they have all the wheels in my head rolling also.

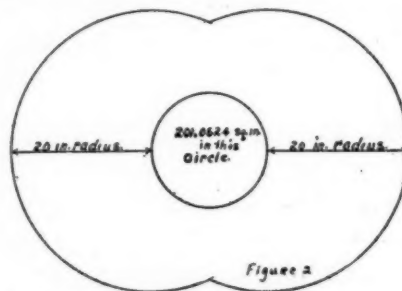
Mr. Scott, of Juanita, Pennsylvania, rolled a circle up against the side of that tank and solved the tank problem correctly, and I wish that he be given credit for it, although his solution differed from mine.

But if you want to see a real circle roll, roll a dollar bill to AMERICAN ARTISAN and ask them to roll you out the little booklet entitled "Elbows, roll 'em out with a disc," and you will be surprised at the number of elbows you can roll out with a rolypoly circle.

The original circle problem was to geometrically prove the construction of graphically adding the areas of circles when their dimensions were unknown. Mr. Buckwalter, of Macon, having failed to consult his dictionary to ascertain the definition of graphic, greatly improved the system by switching from the graphic to the mental. Had the dimensions of the thirteen circles been

unknown, Mr. Buckwalter's mental capacity for circles would have been taxed to the utmost to have mentally figured their combined areas. Houdini's feats would have been amateurish compared to his.

And in the tank problem Mr. Allen, of Aberdeen, must have thought there was a ten-acre space down between those tanks for the operation of the forbidden shingle and the three-dot system. I let this pass as I just suppose he had a system of using those radii on the installment plan. Mr. Dan S. Colvin's solution may have been correct, his drawing was not shown.



The kids across the street from my place have a college yell that goes something like this: "Holy smoke, I've got your goat, U nanny, U nan-ny, baa." Well, brother Harrison, of Kennelworth, has got my goat all right, for I cannot show him that point of tangency of the string and tank, and will ask that some good-natured reader lend him a magnifying glass.

Another one of the critics stressed strongly that the old Pythagoras six, eight and ten triangle was the most perfect dope in existence to cure the ills of the sheet metal craft, and now brother Harrison says that for it to be effective, it must be prescribed by the bottle-ful (Anti-Volsteadpath prescription) and not in microscopic doses. This is rank inconsistency. Another one of the critics put all his faith in the healing powers of the good old steel square. I was then dis-

illusioned into thinking that perhaps the boxwood rule, a derivative, would act just as well in an emergency, but nay, nay, Pauline, chiro-practical advises the steel tape, as there is an infinitesimal difference in the graduation.

Well, there are a bunch of us fellows in this world who are not near so practical as some of the serious-minded fellows. We sometimes tie knots in a pig's tail, in lieu of nailing on a perfectly good plank, to keep the pig from crawling through a hole in the fence. And it works, too, Mr. Harrison, provided you tie the knot tight enough. And I know of another guy that nails his pants on every time he busts a gallus button. Impractical. I say not, for a button saved is a button made.

I will have to decline the title of Chief Estimator conferred on me, as I do not feel qualified to hand out anything along this line. Try "Neubecker and Hopp," sold by AMERICAN ARTISAN at so much per. Furthermore, I do not agree with Mr. Harrison that the carnival should pack its tent and move.

However, as some of the fellows couldn't see through the Houdini trick of making $a^2 = x^2 + x^2 - 2xm$, I will expose the trick. Expressly for Mr. Harrison. Refer to the figure on page 28 of September 13th issue of AMERICAN ARTISAN and call the altitude of the triangle within the circle h . Then $a^2 = h^2 + (x-m)^2$. Also $h^2 = x^2 - m^2$. Substitute this value of h^2 in the first equation, then $a^2 = x^2 + x^2 - 2xm$. Simple, is it not?

Now to escape these serious-minded critics I am going to propose another problem, to the carnival bunch, without any restrictions whatever. Let the sky be the limit. You may solve it with sledge hammer and tongs, fine drafting instruments, dynamite, steel squares, nitro-glycerine, steel tapes, dividers, stretch, strings, boxwood rules, steam rollers or anything else that you may find practical.

Find the area of figure 2 herewith and you need not worry about that overhead.

Columbus Ohio Sheet Metal Men Open Season with Chicken Dinner.

The Columbus Sheet Metal Contractors' Association inaugurated its fall and winter activities with a toothsome chicken dinner and a rousing business meeting. The vigor with which the members took hold of and worked on the major subjects confronting the industry indicated that substantial constructive progress will be made throughout the whole catalogue of sheet metal problems.

The Columbus furnace Code was enacted into law nearly a year ago and the members were asked to give their opinion of the ordinance and its execution. Each member responded freely and all agreed it was being fairly, conscientiously and vigorously enforced; that it was of distinct value to the dealer and the public because it insured an efficient installation to the honor of the contractor and the satisfaction of the owner; that it stabilizes competition because competitors must propose like installations and that the irresponsible investment builder and short sighted owner are prevented from coercing the contractor to make an installation that is inadequate to meet the demands made on it.

Some few were of the opinion that in some instances the inspection was not quite up to standard. Therefore, a committee was appointed with which all complaints shall be placed and who shall investigate the facts and if they justify, report the case to the head of the municipal department.

It is very evident that the division of opinion that existed between contractors at the time the code was proposed has entirely disappeared and all agree that with more time and experience in its execution that the code can be further strengthened. It was cited that the flues of many double dwellings and connected apartment buildings had not sufficient capacity to carry a furnace and other openings but this was recently corrected in Columbus by an amend-

ment to the general building code.

Only recently certain manufacturers reinstated datings withdrawn during the war period.

In connection with the various freight allowances, datings, etc., which were in vogue prior to the war, there was in most cases a good, sound, economical reason for such allowances and it is gratifying to note the manufacturers have finally come to the conclusion to return to their former more liberal standard and custom.

Simplification.

In our annual report a year ago, particular mention was made of the work being done by the Division of Simplified Practice of the Department of Commerce, under the direction of Secretary Hoover, in encouraging the elimination of unnecessary sizes, styles and varieties.

It might not be amiss to state a self evident truth which apparently is not given as much attention as it deserves—that is, the expense of handling, warehousing and carrying a size which is seldom called for, is considerably more than in carrying a size of the same goods in regular demand.

Surplus Stock Bulletins.

During the year we have continued to issue at intervals bulletins listing overstocks held by members, and numerous sales have been effected in this manner.

Function of the Wholesaler.

At a conference held under the auspices of the Department of Commerce about a year ago, the function of the wholesaler was defined as follows:

"It is the wholesaler's function to carry a well selected stock of merchandise to buy in suitable quantities—to warehouse reserve stock for retailers within a radius of economical distribution and convenience of service and to resell in proper units to the retailer as economically as possible."

Attention has recently been called to the fact that some wholesalers at times sell merchandise direct to the consumer at wholesale prices, thus depriving the retailer of the profit on such transactions.

It is contended that such practice is unfair, unethical and uneconomical and the office of your association offers no defense for the wholesaler who endeavors to sell the retailer and then also sells the consumer, who would otherwise purchase from the retailer.

If a wholesaler wishes to sell consumers, he should announce this policy and open a retail department.

Our experience would indicate that the wholesaler with a retail department has the same overhead expense as the individual retailer and generally the selling prices of such retail departments are on a basis which cause no complaint from competitors.

The Rights of Buyers.

Our attention is often called to cases where manufacturers attempt to sell wholesalers and at the same time sell the retail trade at approximately the same price.

Members have asked us to correspond with such manufacturers and to give publicity to such policies.

The Sherman law prohibits our association, or any combination of two or more, from giving publicity to manufacturers who act in this unscrupulous manner, and in this connection we would remind you that our Association has never had its actions questioned by the Department of Justice or Federal Trade Commission.

Acting upon the suggestion of State President Henslee that existing locals aid the state association to organize the towns within a reasonable radius, it was agreed to invite the contractors in the unorganized towns of Lancaster, Delaware and Marion and others within that radius to attend the meetings of the Columbus Association.

Committees were appointed to cooperate with the national and state committees on metal cornices and publicity, and action was taken to further the cause of standardization and better materials.

If some other fellow's opportunity looks better to you than your own, remember yours probably looks better to him than his own.

Metal Branch of National Hardware Association Meets at Atlantic City October 14.

Chairman Donlevy Opens Discussion on National Advertising by Manufacturers of Roofing Products.

THE session of the Metal Branch of the National Hardware Association was opened Tuesday morning by W. H. Donlevy, chairman, with the following remarks:

This meeting should prove to be one of the most interesting and important the Metal Branch has ever held.

Some of the activities of the branch are in a fair way to be brought to a successful conclusion at this time.

For years we have discussed and advocated the necessity of a national campaign of advertising by manufacturers of metal products, with special reference to those materials used for roofing.

We believe large quantities of inferior products used for roofing have been sold as a result of the vigorous advertising by their makers. We believe Sheet Metal has no superior and few equals for roofing when properly applied.

It is, therefore, gratifying to know the manufacturers have finally decided to launch a national advertising campaign, the details of which will be given you a little later.

The Metal Branch has fallen in line with the efforts of the Department of Commerce to effect the rational elimination of unnecessary or undesirable sizes and gauges of many products in the steel industry.

You will have presented to you at this meeting for your consideration the reports of three simplification committees, covering Sheets, Terne Plates, Eave Trough and Conductor, Elbows and Shoes.

You are invited to give these reports your earnest attention and I trust they will receive your endorsement.

In addition to the subjects named in our informal program, any member is at liberty to present for our

consideration any other topic or question that may appeal to him.

It is exceedingly difficult at times to formulate an interesting program—it is only by your suggestions and participation in the various discussions that we can derive the greatest benefit from our conventions.

Chairman Donlevy then introduced Mr. A. W. Davis, a representative of the New York Central Railroad, then addressed the association at length on the subject of railroads.

The next topic is one of unusual interest to us at this time, which I referred to in my opening remarks, a subject that we have discussed for a number of year and finally came to a full appreciation of it—"The Publicity Campaign of the Sheet Steel Manufacturers — Developments, Present and Prospective." I will call on L. D. Mercer of the United Alloy Steel Corporation, Canton, Ohio, to address us on this subject. His address is published elsewhere in this issue.

Effect of Pittsburgh Plus Ruling.

Chairman Donlevy announced that the next topic for discussion would be "The Immediate Outlook; the Effect of the Abolishment of the Pittsburgh Basing Point."

The chairman called for remarks by C. F. Ahlbrandt, of the American Rolling Mill Company, Middletown, Ohio.

Mr. Ahlbrandt spoke as follows:

Mr. Chairman, much of the discussion on the so-called "Pittsburgh Plus Case" reveals an ignorance as to its inception, misunderstanding of the economic principles on which it is grounded and tends to exaggerate its importance to all consumers of steel products.

The practice of using a common basing point dates back prior to 1879, when Philadelphia was the

center of the industry. Then it was "Philadelphia plus." Gradually, the trend was westward and when Pittsburgh wrested the supremacy, it became "Pittsburgh plus." The moment that Chicago, Duluth or Birmingham assures primacy in production the basing point will change automatically based inexorable economic laws.

It is an accepted fact that the Pittsburgh district produces well over 50 per cent of the total production of the country. No other region supplies sufficient material to meet its own entire demand. Hence, the users in that district must depend on outside steel producing centers for at least a portion of their requirements. Consequently, by the operation of the law of supply and demand, the nation-wide price tends to seek the level of the major producing district or the price at which the Pittsburgh producer is willing to sell. Naturally, that price includes in part the freight to destination.

Same Practice in Other Fields.

This same practice is used openly by many other industries, among which the following are well known:

Spelter, quoted and sold F. O. B. St. Louis.

Lead, quoted and sold F. O. B. St. Louis.

Glucose, quoted and sold F. O. B. Chicago.

Soda Ash, quoted and sold F. O. B. Detroit.

Lumber (certain grades, quoted and sold F. O. G. Seattle.

Hardwood flooring, quoted and sold F. O. B. Cincinnati.

Beet sugar, quoted and sold F. O. B. New York, New Orleans, San Francisco.

Transactions in wheat are usually based on the market at Chicago or Minneapolis with adjustments made contemplating the freight charges to

those points. These markets are further influenced by the international market, based on prices quoted F. O. B. Liverpool.

In a similar way, the price on live stock is usually based on Chicago or Kansas City.

In reality, this practice is also used by every manufacturer, distributor or retailer who considers freight from competitive points in computing prices.

The "Pittsburgh plus" practice has exerted a definite stabilizing influence on the industry favorable alike to producer and consumer. It has retarded excessive price inflation in times of pressing demand. It gives the consumer of steel products a more understandable and accurate check on market and competitive conditions.

No accurate forecast can be made as to developments from the recent ruling of the Federal Trade Commission.

It is extremely doubtful whether any change in the practice will mean a marked difference to consumers of steel products. The laws of economics, especially supply and demand, are certain to work in and through whatever methods or practices are established. In fact, one writer has characterized the proceedings of the Trade Commission in this case as "fighting a phrase."

Business Outlook.

W. E. Scott of the Youngstown Sheet and Tube Company, Youngstown, Ohio, spoke on the subject of business outlook and the effect of the abolishment of the Pittsburgh basing point. He expressed the opinion that there would be no great change in the policy of the country regardless of who might be elected as the next president; that in reference to the elimination of the Pittsburgh plus he was of the opinion that the steel business would soon adjust itself to the new order of things; he did not think there would be any great reduction in steel production, that it would rather increase than decrease.

John Follansbee of Follansbee Brothers Company, Pittsburgh, was of the opinion that little incon-

veniences would be caused by the breaking up of the Pittsburgh base and that the troubles would be ironed out during the next few months and business would go along as in the past.

L. D. Brueckel of the Weirton Steel Company, Weirton, West Virginia, said: In regard to the Pittsburgh plus, like some other manufacturers we have not as yet committed ourselves to a definite policy. We feel that in the future the buyer will pay the freight just as he has in the past. We believe also that the manufacturers are going to be compensated for their material also as they have in the past. Certain people believe that the abolition of the Pittsburgh plus will make it no longer necessary to pay freight on the material they purchased, but they are very much mistaken. Insofar as the line that we manufacture, which this association is interested in, I can say that our business is better now than it has been for over six months, and from a survey that we have made we think there will be a progressive movement this winter and next spring. We believe that business will be better now than it is except for this Pittsburgh plus matter. It has had a very depressing effect on the business in general.

Chairman Donlevy introduced R. K. Krichbaum, of the Superior Sheet Steel Company, Canton, Ohio, to speak on Quantity Differentials.

Mr. Krichbaum expressed the opinion that buyers should be required to pay more for small shipments out of the warehouse than they paid on direct factory shipments, owing to the added expense of the jobber where goods are taken out of his stock and handled.

Chairman Donlevy then took up the question of the Sheet Steel Simplification Committee and the report of the Terne Plate Simplification Committee. He referred to the conference held on Tuesday which had been presided over by Major A. E. Foote of the department of commerce. The chairman called on W. C. Carroll, chairman of the Committee on Sheet Steel Simplification, to report on the ac-

tion taken at the conference, and to make further suggestions as to what action should be taken by the metal branch on the subject.

Mr. Carroll said: Mr. Chairman, on yesterday's meeting we had a three hours' session and I would like to say that it is the best meeting that I have ever attended of the association on this subject. The conference yesterday was called by the Division of Simplified Practice of the Department of Commerce, Washington, D. C., presided over by Major A. E. Foote, and the expressions that I have heard last night and this morning were that the work which we did yesterday was the most constructive piece of work which has ever been done by the sheet steel industry, and that means the manufacturers, jobbers, consumers and fabricators and everybody interested in sheet steel. The proposition now is in the hands of the Department of Commerce. There was a committee appointed, or a committee will be appointed, which, I suppose, we will call a Committee on Review. That committee will consist of one member representing the Metal Branch of the National Hardware Association of the United States, one member representing the sheet manufacturers, one member representing the National Association of Sheet Metal Contractors, and advisory along with that committee, a member of the Bureau of Standardization, a member of the United States Chamber of Commerce, of the American Engineer Society Standardization Committee, and of the Federal Specification Board.

The period which we adopted for review of this plan, that is to say, to give it a fair trial, and to consider it carefully, was the period between the meetings of the Metal Branch, which are approximately six months apart. Without doubt everything that transpired will go into the minutes, and it would just be a duplication of that information. You were all here yesterday, I don't think we should go into that matter further at this time, Mr. Chairman.

Chairman Donlevy: What we

want to do, Mr. Carroll, was to get the final endorsement or approval of the Metal Branch at this, our regular meeting. The meeting yesterday was not confined to the members of the Metal Branch. I said before you came into the room that the plan received the unanimous approval of those present. I will be very glad to entertain a motion that the plan as submitted by Mr. Carroll's committee be approved by the Metal Branch at their regular meeting.

Mr. Carroll made the motion referred to, which was seconded and unanimously adopted.

Major Foote stated that the Department of Commerce would immediately issue what is called a summary report which would cover the resolution and the recommendation which was presented and approved by the joint meeting Tuesday afternoon; that along with the report would go an acceptance blank which he hoped would be signed and returned as soon as possible to the Department of Commerce.

Chairman Donlevy then called for the report of the Terne Plate Simplification Committee, L. D. Brueckel, chairman.

Mr. Brueckel reported the following recommendations by the committee:

Under the present custom or usage terne plate is made and sold in several weights or coatings—8, 12, 15, 20, 25, 30, 35 and 40 pounds. After consideration, it is their recommendation that the 12-pound and 35-pound be eliminated from manufacture in the future, or better to say that they recommend that these coatings not be manufactured in the future because they serve no good purpose, and that such action would result in the elimination of 275 sizes, leaving a balance of 936 still obtainable.

This report was discussed at considerable length by the manufacturers of this product, but finally the recommendation was unanimously approved by vote.

Chairman Donlevy referred to the action of the conference in regard

to copper eaves trough conductor and accessories. It was agreed by the Metal Branch to recommend that copper also be included in the report, so that nothing lighter than 16-ounce copper should be used in the manufacture of eaves trough conductor and accessories, and that that should be added to the report adopted by the Metal Branch.

After the close of the Metal Branch meeting a conference was held among the terne plate dealers, manufacturers and jobbers in re-

gard to the thickness of terne plate for roofing purposes. After considerable discussion, Mr. Warren Carter made the following motion:

That the manufacture of 12-pound and 35-pound coatings be eliminated and that no terne plate for roofing purposes be made of a base metal which is lighter in weight than "IC," which is a term well understood.

The motion was seconded and unanimously adopted.

The meeting then adjourned.

L. D. Mercer Outlines Plan Used by Sheet Steel Industry to Sell in Greater Volume.

Tells Atlantic City Conventionites of the Advertising Campaign Now in Prospect.

L. D. MERCER, of the United Alloy Steel Corporation, Canton, Ohio, outlined the plan which has been adopted by the steel sheet manufacturers for the promotion of the greater use of sheets for building purposes, as follows:

In years past I have appeared before you several times to speak with reference to the much discussed national advertising campaign, but each time it was necessarily in the hope of anticipation. Today I come to talk on the same subject, but this time I come in the joy of realization. The vision which some farsighted, outstanding men in the steel industry had more than ten years ago is about to be fulfilled and translated into action.

As you recall, several years ago a national survey was made by a well known advertising agency who made an exhaustive report, but whose conclusions were not specific enough to create confidence and action. After having been permitted to lay dormant for a few years, something over a year ago the project was revived and other specialists employed to make another national survey to diagnose the situation, to prescribe a remedy.

The firm employed to do this piece of work was Crosby, Chicago, who seem to have a way of their own of going about given specific

purposes. They certainly went about the diagnosis of the sheet steel industry in an original and effective way and they have prescribed a remedy, which, when submitted to the interested mills, met with their enthusiastic approval and support, so that today the campaign, which termed the Sheet Steel Trade Extension Plan, has back of it the loyal support of 93 per cent of the independent producers of steel.

Unless you thoroughly understand this Sheet Steel Trade Extension Plan you may perhaps be disappointed because it is to be far different from what is generally understood as a national advertising campaign. There will be, of course, some national advertising as such, but beyond and above that there has been developed a plan that strikes its taproot into the very heart of the industry and much of the most effective work of the plan will be behind doors and far from view of the multitudes who are being unconsciously influenced by the plan.

The philosophy back of the plan is the simple practical one of cooperation beside upon self help. This rests in turn upon the realization by the mills that are not the sheet steel industry. The plan recognizes the fact that the mills plus you and thousands of others are the sheet steel industry. It takes into con-

sideration the fact that the mills are the production division, while you are the distribution division and it was only when the mills, great as they are in volume of business, really began to understand this that they studied you, great as you are in both volume and diversity and realized that great as we all are we have not really begun to harvest a full crop of prosperity from the field of buying power. This full harvest can only be garnered when our united developments of the unlimited service values of the products that the mills make and that you merchandise in myriad forms is put into effect.

In years gone by the trouble has been that most of us have been working inside the circle of the sheet steel industry, whereas the Sheet Steel Trade Extension Plan is designed to lift the eyes of all of us over the rim of the industry with definite purpose and sharp intent to serve our individual interests and to build up our individual businesses.

All well regulated businesses nowadays have a president, a secretary, a treasurer, a board of directors and such other officials as is necessary for the successful conduct of their business. Beyond these are the stockholders and beyond the stockholders is the plant, the mill, the factory—in other words, the business itself.

The execution of the Sheet Steel Trade Extension Plan is vested in a Sheet Steel Trade Extension Committee which has been selected by the stockholders, otherwise the mills interested, and which is composed of seven well known men connected with the sheet steel industry. The committee, of course, has a chairman and a secretary and are flanked by an advisory committee of nine other well known men in the industry. Therefore, the Sheet Steel Trade Extension Committee has the support and advice at all times of the advisory board of nine, but they also have at their command not only the advice of that committee but of the entire industry as such.

Operating Branch in Chicago.

Of course, having such an array of officers there must be an operating branch which would correspond to your business, or to a manufacturing plant, or to a rolling mill to operate. Therefore, the plan has an operating branch which in present plan is as a matter of fact Crosby-Chicago, and in addition thereto has a central office which is located in Pittsburgh, Pa. The central office is under the direct supervision and management of the Sheet Steel Trade Extension Committee whose jurisdiction is executed in the office by a secretary who in turn reports all details of the business to the Trade Extension Committee.

Vital Points of Plan.

The vital points of the plan are:

(1) A determination by the mills to follow through on a clearly charted aggressive business to build up more business. They are definitely committed to three years participation in the plan.

(2) A clear understanding by the mills that the measure of success that shall attend this undertaking shall attend this undertaking profit from it. As you profit, the mills can hope to do likewise.

(3) That nothing short of direct specific activities can be depended upon to build better business for all of us.

Briefly states, those three terms describe the Sheet Steel Trade Extension Plan. In operation it represents the organization and conduct of the business as referred to above. The participating mills are the stockholders of this business and the Sheet Steel Trade Extension Committee is the board of directors of the business. The advisory board is the general conference committee. The operating branch is the plant or factory that produces the material needed to carry on the plan. The purpose of the whole undertaking is to build broader markets for everything made from sheets and to develop a multitude of new uses for sheets and to develop a multitude of articles which can in the future be manufactured from sheets which at the present

time are made from some other product.

In adopting the Plan the mills have attempted to escape the pitfall of generality and to select a plan that is absolutely closely knit, powerful and continuous. We believe that we are not in any way following the easiest way of spending the several million dollars in the ordinary forms of advertising in the hope that through the law of average somewhere, somehow, somebody will get results from it. Because it is a truly business undertaking the Plan takes full cognizance and advantage of the tremendous power of advertising, but it attempts to harness that power to specific activities.

Definite, Specific Help Provided.

You will never fully comprehend the scope and the aim of the Sheet Steel Trade Extension Plan unless you thoroughly revise, if indeed you do not entirely discard, your present notion of association advertising. The fact is that the Plan is designed to aim straight and square at A man in A town who has A business wherein he uses A sheet, or who has a business in which we believe a sheet can be used, and it is the aim to build his business to greater volume and better earnings year after year. The Plan provides real definite specific continuous help, support, counsel and coöperation with that man or firm and brings to him the actual thing, the inspiration and suggestion that will enable him to build his business.

We believe that the organization and operation of this Plan will make of the central office of the Trade Extension Plan, which has been established in Pittsburgh, absolutely the greatest center of information and constructive help in any industry in the United States. The Plan does not contemplate for a moment the idea that the mills know all about the solution of your various problems. In other words, it does not start grown up, but is so drawn that its operation starts with a number of well-tested activities that will be developed, broadened and strengthened, just as rapidly as

you take them, use them and get results from them. From these activities there is constantly going back through the central office a growing stream of knowledge of success and of failure.

The cost of this Plan and the organization and the production of all the material referred to is to be paid for by the mills. Some forms of it that are to be developed as business builders and trade openers we confidently expect will be paid for by you in the volume or quantity that you need only when you have been convinced that such business builders will be of real service to you in your business. In any event, what you pay will be infinitely less than what you would have to pay to even approach its quality and effectiveness if you produced it only for yourself.

Already at Work.

There are tens of thousands of distributors, fabricators and consumers of sheets who are not objects of charity nor the subjects for endowment nor beneficent gifts, who we believe are ready to use tested and proved business builders to broaden their markets and to pay for them. Those people are just as much a part of industry as the mills and from their profit standpoint are as ready to work to earn as are the mills. The central office was established they had a list of about six thousand names with which to start, those names having been available through already collected data. In sixty days those six thousand names have grown to nearly seventy thousand, which is an absolutely authentic list and which is constantly checked and watched for changes and the end is not yet.

National advertising mediums speak glibly of one hundred and ten million possible buyers in these United States and many are led into the pitfall of rushing into some national advertising medium with a supposedly national message, but who in reality is simply scattering his powder and who never brings down a single duck because he aims at the whole wide world, whereas, as stated, this plan and its treatise ac-

tively aims at A man, A woman, A farmer, etc., instead of aiming at so many million of this class or the other.

The Plan is so comprehensive, so far-reaching, so non-exhaustive, that it is almost impossible to give you an idea of its ramifications and its power without consuming so much of your time as to become a bore, but as the Plan unfolds and its operation increases and spreads you will get full and accurate knowledge of its various undertakings and activities from the Sheet Steel Trade Extension Committee through the central office, and this information will be released to you just as rapidly as the work reaches each point of its progress.

Jobbers Must Coöperate.

Be assured, however, gentlemen, that the production end of the sheet industry is wide awake, on the mark and set to go. It is your business, therefore, as the distribution end of the industry, to be also set on the mark ready to go, to put your shoulders to the wheel and to do everything you can, because in reality while we are working for ourselves in so doing, we are just as much in reality working for you. "No man liveth to himself," said Paul many years ago, and that is just as true today as it was then, and it is equally true that no business is independent, but is so interlaced and intertwined with many other businesses round about it that none of us can afford for a moment to feel that we are separate and apart and are perfectly able to handle our own problems.

There has never been a time when there was as much sunshine ahead of the sheet steel industry as is promised now through the operation of this Trade Extension Plan, and I plead with you one and all to lend it every possible support whenever and however you are appealed to from time to time as the operation of the Plan unfolds.

Gentlemen, you have pleaded for years for something in the way of national advertising. The realization of your hopes will, we trust, be far greater in pleasure, in profit, than your anticipation has been in

the years gone by, and now that the procession is forming and the parade is about to start, we trust and plead with all our power that you immediately signify your desire and intention of promptly and without any demurring taking your place in the procession and walking in step as the parade gains momentum through the ensuing three years.

The old saying that "opportunity knocks but once" may or may not be true. There is one thing that is true, however, and that is, that it is far better to take advantage of an opportunity when it is knocking, rather than to depend upon its coming again. The opportunity of your lifetime is knocking at your doors today and we shall indeed be most deeply grieved and disappointed if you do not rise to the occasion and join as one man in the promotion of the Plan which is designed for you just as effectively and as earnestly and as sincerely as it is designed for those who are footing the majority of the bills. Will you do it?

One Good Turn Deserves Another and Gets It.

Does it pay to have a customer's good will—for your store and the goods you sell? It does.

For instance, recently a lady told a dealer why she came to him to buy a washing machine—

"My washerwoman raised the price of the wash and sometimes the clothes were not cleaned. I have kidney trouble, and washing the old way hurts my back. My husband and I talked over and decided to buy an electric machine, with which I might wash and dry the clothes. I inquired the next morning of my neighbors and found three makes being used by my neighbors. Mrs. Barnes told me she had bought her machine here two years ago and that she thought your machine the best on the market and that you were mighty nice people to deal with. So I bought my machine here and, like Mrs. Barnes did to me, will certainly recommend your store and the . . . machine to my friends."

W. C. Markle Outlines Sheet Metal Apprenticeship Training as It Is Done in Pittsburgh.

Tells How Youths Are Recruited, Disciplined and Trained at Expense of Employer to Benefit of All.

THE lack of trained sheet metal workers greatly accentuated by the more stringent immigration restrictions, which went into effect July 1st, 1924, have caused sheet metal contractors to consider the problem of training apprentices for their craft.

W. C. Markle took up this very engaging subject at the recent meeting of the Pennsylvania Sheet Metal Contractors' Association, held at Pittsburgh. Mr. Markle clearly outlined what is being done in training of sheet metal apprentices in Pittsburgh.

Mr. Markle's Address.

The preparation of a satisfactory system for the training of sheet metal apprentices, such as is now in effect in this city, has required much labor and the best thought that could be given to it by those to whom the work was assigned by the Sheet Metal Contractors' Association of Pittsburgh.

It did not "just happen," nor was it developed over night, but it passed through a stage of experimentation and elimination of methods which were proved to be ineffective, until today we have a system from which we may expect satisfactory results.

About 19 years ago, the Carnegie Institute of Technology offered a night course of instruction in sheet metal pattern drafting, mathematics and shop practice for sheet metal apprentices, and the sheet metal contractors agreed that apprentices should take advantage of this training. Then, with few exceptions, they gave no further attention to the matter, with the result that the few apprentices who registered for the night school class attended more or less regularly, and finally, on one pretext or another, they quit school without having received value for their tuition fee, and without the

school's having accomplished anything for its labor.

Skilled Workman Sought.

This course was followed, with a few slight variations, until 1921, when the situation became so acute that the members of the association found it imperative that more efficient methods be found to produce skilled workmen in order to meet the requirements of the ever increas-



W. C. Markle.

ing volume of business. The conference committee, which was appointed to meet with a similar committee from the local union of sheet metal workers for the purpose of effecting a working agreement, was instructed to formulate a plan which would make attendance of apprentices at the night course offered by Carnegie Institute of Technology compulsory, and not optional.

The joint conference committee had no difficulty in reaching such an agreement, and we felt confident that we had solved our problem. However, it did not require more than a few months to prove that there was still something lacking. There was no one authorized to enforce this agreement and, as you well know, "everybody's business is nobody's business," so we failed

again because of the indifference of the employers.

The following year the joint conference committee, with the cooperation of the representatives of Carnegie Institute of Technology, made such changes as they believed would remedy the defects in the former agreement, and recommended that an apprenticeship committee be appointed with full power to regulate apprenticeship training.

The agreement presented and approved by both the Sheet Metal Contractors' Association of Pittsburgh and the local union of sheet metal workers is now in effect.

Apprenticeship Agreement.

This agreement was entered into on February 28, 1923, and it required considerable work on the part of the committee to sell to our sheet metal contractors the idea of sending apprentices to school one day per week.

There were many reasons given why such a system could not successfully be put into operation, the chief reason apparently being that it had never been done before.

On registration date, October 1, 1923, there were sixty-four apprentices registered at Carnegie "Tech" for the apprenticeship course as outlined in the agreement. They were divided into four sections and received instructions one day each week—two hours in mathematics and four hours in pattern drafting and shop practice. As there was no entrance examination required for this course, and no two of the class had the same school preparation, it was impossible to properly grade these classes when first organized. Many of these boys had quit school in the fourth and fifth grades, some after completing grammar school grades and a few were high school graduates, and the instructor in mathematics soon discovered he had a real problem on his hands.

This situation, however, can be handled to better advantage during the next term, as boys who have had advanced work can be grouped in such a way that their progress may not be retarded by those who have had less school preparation.

Of the sixty-four boys who registered, nine made the final grade "A" for their school work, thereby earning a reduction of two months on their next eight months' period. This reduces the period to six months, and thus they are naturally entitled to an advance in wages two months earlier than the boys who failed to make this grade.

The local union, to show its appreciation of the work done by these boys, has presented each one with a gold button, which, they believe, will be an incentive for greater effort on the part of the boys who did not make the highest grade.

The final grades for the year were as follows:

A—	9	} 28
B—	10	
C—	9	
D—	19	
E—	8	} 27
(Repeat).R—	7	
(Dropped)...	2	
Total.....	64	

Of the two dropped from the class, one left the trade to follow another line of occupation, and the other was of such an unruly disposition that he was called before the apprenticeship committee and reprimanded. As he showed no inclination to conform to the rules of the school there was nothing left for the school to do but to expel him, after which action there was a marked improvement in the conduct of some of the boys. We consider the grade record of this class to be very good when we take into consideration the fact that so many of the boys had such poor school preparation before starting to learn the trade. There is, however, much room for improvement, which can only be made by using greater care in the selection of apprentices in the future.

What Apprentice Qualifications Are Necessary?

This naturally brings up the question, "What should be the qualifications of an apprentice?"

1st.—He should be at least 16 years of age.

2nd.—He should have at least a grammar school education.

3rd.—He should possess a reputation for honesty and ambition.

The problem of securing this type of boy is not as serious as you may think. During the months of May and June a number of boys leave school with the determination to go to work and with very few exceptions, have no idea as to their future vocation. They depend wholly on chance to find the job which will determine their entire future, with the result that many of them are "misfits" for the rest of their lives. Naturally, our craft has its share of "misfits."

If the employer will give some consideration to the selection of his apprentice, he can get the type of boy who will be a credit to the craft and to himself. To make the job attractive it will be necessary to show the advantages to be had in learning the sheet metal trade.

In many of the other crafts there is less skill required, since the material is fabricated in plants especially equipped for the manufacturing of the parts required, and all that remains to be done is the assembling of these parts after they are delivered on the job. In our craft we still purchase sheet metal in flat sheets and make it up into all kinds of shapes and objects.

I do not wish to discredit any other of the building crafts, as it certainly requires training to acquire the necessary skill to perform the work on buildings in a satisfactory manner, but I do want to emphasize the fact that we are still fabricators and installers of sheet metal products, and this, to my mind, clearly shows why we should put forth our best efforts to establish and maintain courses of instruction for the training of sheet metal apprentices.

What Pittsburgh Employers Have Done.

The Pittsburgh employers who have sent apprentices to Carnegie "Tech" during the past year have spent some money for the training of their apprentices, but they have got more in return through the greater efficiency of these boys than it has cost them.

In closing I want to call your at-

tention to the fact that a number of shops throughout the state, and I might add throughout the country, do not employ apprentices. This is a very serious condition. Every sheet metal contractor should make provision to train as many apprentices as possible, as, on account of immigration restrictions, we cannot hope to have ready-made, European-trained mechanics available for a long time.

If we expect to maintain our craft on a high standard, we must all be willing to do our share of the work required to develop men competent to do any sheet metal job offered to us.

Status of Customers Who Are Always Right.

Some merchants say the customer is *Always Right*.

How will this apply to credits?

Is the customer *Always Right* when he asks for short-time credit and then takes six months or a year to pay?

Is he *Always Right* when he uses his credit at stores to enable him to collect interest on bank deposits?

Is he *Always Right* in asking credit without knowing to a reasonable certainty that he can make his payments as agreed?

How the Silent Man Looks in a Glass Show Case.

Every day in every way I am becoming more and more conservative, less inclined to talk and less inclined to write, and I propose to become more and more so until I won't be worth a damn. Then I can sit silently by, let things drift their way, mind my own business and do the best I can with what fate casts my way. But I will have this satisfaction and that is, that I did at least try, once in my life, to make life easier, business better, men happier, our flag more respected and God more revered. With this solace, I can ease my mind and still my conscience as silent men sit indifferently by and let things go to hell.

Gun and Shell Window Display Which Helped to Double the Sales of Ammunition for the Store.

Window Display Has Extraordinary Power of Suggestion When Properly Made.

THE accompanying duck hunting season window display was arranged by Dan P. Hill, advertising manager for the Ogden Hardware Company, Ashland, Kentucky.

We do not need further evidence to convince us that hardware dealers are enthusiastically willing to learn all they can about this most important accomplice to retail salesmanship. Some of these windows seen in traveling through the rural com-

sold the year before by adopting more intensive selling methods, one of which was, of course, the window display.

Action window displays do increase the sale of goods. Why? Because they attract attention and arouse interest. They are suggestive, and no greater power exists than that of suggestion.

That power of suggestion is certainly very strongly portrayed in

other ads in the same advertising medium will exert no more pulling power than their neighbors.

One merchant whose advertising has transformed a losing business into a highly profitable one has found that it pays to include in his ads the daily weather report. He has arranged to secure from the weather bureau every day a card showing the low and high temperature of the preceding day, and the



Gun and Ammunition Window Display Arranged by Dan P. Hill, Advertising Manager of the Ogden Hardware Company.

munities are real expressions of art and would do credit to the larger towns, in spite of the common but fallacious notion that small town dealers are back numbers when it comes to retail merchandising.

Merchants in rural communities, with exceptions, of course, are coming forward in their adoption of the window display as a selling help.

The store which put on the window display shown actually increased its sales of ammunition and guns almost double over what it had

this window display. It also indicates what a practical use has been made of the manufacturer's dealer helps. The picture of the hunter and the ducks on the wing in their habitat is very suggestive.

Here Are Two Unique Features of Merit in Advertising.

Attractive ads are as necessary to merchandising as are attractive goods. Ads that look like all the

forecast for the next twenty-four hours. The newspapers in which this merchant advertises circulate through a prosperous farming region, and farmers are interested in the weather twelve months in every year. This merchant's advertisements often are clipped out bodily and preserved for reference by farmers' families.

Representation of goods and services should be truthfully made and scrupulously fulfilled.

Thirtieth Annual Hardware Convention Draws Men and Women Throughout Country to Atlantic City.

American Hardware Manufacturers Also Convene at Blenheim Hotel, October 13, 17.

ATLANTIC CITY, NEW JERSEY, is alive and bustling with swarms of hardware men and women this week, attracted thither to attend the thirtieth annual convention of the National Hardware Association of the United States and the American Hardware Manufacturers' Association. Sheet metal men in large numbers were also drawn to the elite of eastern watering places by the meeting of the metal branch of the hardware association.

The meeting of the Automobile Accessories branch was held Monday, October 13, at the Shelburne Hotel.

Tuesday afternoon, October 13, Sheet Steel, Eaves Trough, Conductor Pipe and Terne Plate Simplification Conference was held under the auspices of the Department of Commerce in the Blenheim Hotel dining hall. An account of this meeting is given in another section of this issue.

The opening session took place Tuesday evening, October 14, in the dining hall of the Blenheim Hotel, President F. A. Heitmann presiding.

The first official act of the assembled members was to sing "America."

The invocation was read by Reverend Edward Yates Hill, D. D., pastor First Presbyterian Church, Philadelphia.

President Heitmann then made his annual address, which was followed by that of President Isaac Black of the American Hardware Manufacturers' Association.

The members of the joint session were very optimistic regarding business outlook, the general opinion being that prices will not go down and that the demand for goods will be sure to increase.

Colonel Stark, of the Canadian Wholesale Hardware Association,

extended the greetings of that organization at the convention and said that business in Canada would be more normal this year than last. Samuel Latty was absent from the meeting.

A rising tribute was paid the members of the two organizations who have passed on since the previous meeting.

While the meeting was going on the ladies were tendered a card party by the manufacturers.



F. A. Heitmann,
President National Hardware Association.

Address of F. A. Heitmann, President, to the Thirtieth Annual Convention of the National Hardware Association of the United States.

Our conventions during the past four or five years have been held at propitious times and this gathering, coming as it does, after a period of uncertainty, gives us an excellent opportunity to review the situation, to consider the various factors which now confront us and to plan for the future.

Now that the Dawes' plan for the stabilization of Europe on business seems to be the most acceptable one proposed, and has been approved by

the various nations, it will be a start in the direction of adjustment of the economic plans of the world.

It must be understood the loan now contemplated is a step in the right direction and it is well to state at this time that this would be a means of absorbing much of the idle capital in this country, which has been loaned at the lowest rates of commercial interest ever known.

This is only the beginning of an opportunity for better business. We should not be too impatient and expect this plan to work out effectively at once, but should the loan now pending to Germany be made, it will only be a beginning of the requirements which will open the way for larger and increased loans and business, even though in certain lines it will probably lead to greater competition with American manufacturers.

If, in this connection, the European nations solve their problems and adjust their financial affairs with each other and with us on a basis that is fair, equitable and workable it would be the best and most encouraging news that industry and commerce in this country could have.

The suspense in these adjustments has been a throttle in the development of all lines of commercial activity.

The agricultural situation, particularly the disparity between the price of farm products and those of other industries, has been greatly remedied in the past few months by the advancing prices of farm products, which has brought them nearer together.

This will be of incalculable benefit to the farmers of the west and south, with the large cotton crop now moving from the south must naturally reflect in the increased business for the present and near future.

The August report of the United States Steel Corporation, indicating an increased booking of ingot steel of 36 per cent, was not only a surprise, but is a great encouragement to the industry and would indicate that business is moving forward.

This, together with the increased business as reported by the manufacturers of farm implements, is certainly very encouraging.

If we do this, we should have nothing to fear.

It is gratifying to know that during the year 1923 our members were able to decrease their overhead expense and we are hopeful that even with the decreased volume of this year's business as reported by some, it will be possible to keep the overhead expense at approximately the same percentage as obtained in the year 1923.

While some sections of the country report a satisfactory business, others contend they have difficulty in maintaining the volume of last year. While not a few report that their volume will be even less than last year.

While this report is not flattering and is not as profitable as it should be, yet we must content ourselves under the circumstances and await the adjustment of affairs that are bound ultimately (and we hope at an early date) to swing back to a point where business can be done on a satisfactory basis so that capital, energy, experience and thrift may be properly compensated.

In the Meantime, Patience Is Required.

While some reduction has been made in federal taxes, we are looking forward to continued decreases in the future, while state, county and municipal taxes are practically the same as they were and in some states increases have taken place during the past year.

We also have with us some high costs that enter into our overhead expense, in which little if any reduction has taken place, for instance, there has been little change in traveling expenses, which enter largely into the expense of our salesmen.

We are pleased to note the Department of Commerce is continuing its activity and that progress has been made in the elimination of sizes, styles, finishes, gauges, etc. This will do more as it is carried out to simplify the hardware and metal business and eliminate much of the unnecessary stocks of merchandise and thereby reduce the capital invested in business.

Our association has rendered every assistance in this that is possible, and we shall continue to cooperate in this excellent move with all our facilities.

We especially desire to commend the National Retail Hardware Asso-



**Isaac Black,
President, American Hardware
Manufacturers.**

ciation on the growth of their work and cannot help but believe that those retailers who closely follow the suggestions made from time to time at the retail conventions and in their official organ, will be greatly benefited.

I want to, on this occasion, extend my heartiest appreciation to the support I have had during my administration from the various committees as well as individual members.

The excellent support given me by our worthy secretary and his most efficient organization has been very helpful to me and has done much to place our organization in the very high position it occupies in affairs of commerce.

**Wednesday Morning, October 15,
1924.**

The Blenheim dining hall was the scene of the executive session.

Secretary-Treasurer T. James Fernley was first on the docket with his annual report.

Secretary-Treasurer Fernley's report follows:

Report of T. James Fernley, Secretary-Treasurer, the National Hardware Association of the United States.

It is my pleasure to present at this, our thirtieth annual convention, a report of the activities of the association during the past twelve months.

It has been our effort to keep in close touch with our members and to render constructive assistance in the consideration of the many problems confronting the wholesale trade at the present time.

Under the direction of our president and executive committee, we have been constantly working for the purpose of promoting the distribution of hardware along progressive, economical lines.

Your executive committee has held two meetings during the year, carefully reviewing the manifold activities of the organization and giving instruction as to new lines of work to be undertaken.

Collection of Delinquent Accounts.

Those of our members who are using the service inaugurated just prior to our last convention for the assistance of members in the collection of past due accounts, report excellent results.

Since our last convention we have handled claims amounting to \$436,845.76 and members have to date reported that \$231,592.05 has been paid.

The amount paid is larger, because at the time this report was made up, some members had not reported.

In all we have handled 4,025 accounts from 149 members.

We wish to particularly urge those members who have not used the service to do so. A number of our members have, since the inauguration of the collection service,

made savings of from five to fifty times the amount of the annual dues through this service, which has been rendered without charge.

Fifty to 60 per cent of the accounts referred to the association are paid and thus all the annoyance,



T. James Fernley,
Secretary-Treasurer, National
Hardware Association.

expense and delay of collecting such accounts through attorneys is eliminated.

Returned Goods.

Considerable thought and attention has been given this subject during the past year and the National Retail Hardware Association is entitled to the thanks from our organization for the manner in which it has emphasized the economical waste of returning merchandise which has been shipped as ordered.

Interest on Past Due Accounts.

We wish to again recommend to our members that those who do not charge and collect interest on past due accounts, give serious consideration to doing so.

Our overhead chart indicates that approximately 80 per cent of our members are now collecting interest on past due accounts and that these 80 per cent receive an amount sufficient to offset half their losses from bad debts.

Cash Discount.

The subject of the cash discount is a hackneyed one, but we wish again to urge our members to insist upon this usual and customary premium from all manufacturers.

At times we find some manufac-

turers who give as their reason for discounting the cash discount of 2 per cent the fact that their terms are not respected and that some buyers take the cash discount after the discount period has elapsed.

The Trade Press.

It is only proper in making this report that we should publicly recognize the service rendered by the trade press in educating, enlightening and broadening all connected with the hardware industry.

We have at times discussed methods of educating our salesmen and our employees, but there is no greater power for the constant education of employees than the reading of the trade papers.

One problem we might well discuss to advantage is, "How can we induce a greater and more thorough reading of our trade periodicals?"

Terms and Datings.

Manufacturers, who, during the war period, eliminated various terms, datings and allowances, have during the past five years gradually restored these allowances and datings.

Individually our members have a right to buy or refuse to buy as they see fit and if a manufacturer is not pursuing a policy which is in keeping with the ideas of an individual member, the member has a right to refuse to purchase from such manufacturer.

Our members individually have a right to ask manufacturers as to their sales policies and if the buying department of our members will be diligent in securing this information before purchasing, there would be less complaint regarding manufacturers' competition.

There is always a tendency among some operators to attempt to sell regardless of ethics, policies, sound business principles.

Overhead Expense Research.

It is very gratifying that our expense chart for the past year indicates a decrease of 1.22 in overhead and it is to be earnestly hoped that it will be possible to still further reduce this figure.

Our overhead expense research this year, in addition to including

the data collected heretofore, also included information as to the compensation of salesmen—the average value of orders received—the method of delivering orders, etc.

Two factors, which are at present tending to increase the expense of distributing hardware and kindred lines, are the increasingly large number of orders received for parcel post shipment and motor truck deliveries.

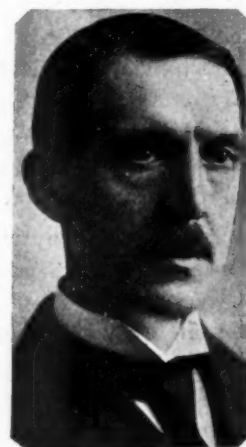
The subject of deliveries should receive careful consideration at this convention as many of our members are giving serious thought to the expense entailed in this manner.

The executive committee in June authorized the secretaries to conduct a research bureau, confining its findings to members only and reporting to none other.

The National Retail Hardware Association.

Inquiry would indicate that many of our members are not acquainted with the work of the National Retail Hardware Association and of its efforts to place the retail distribution of hardware on a sound, economical, progressive and profitable basis.

The National Retail Hardware Association is doing a splendid work



W. H. Donlevy,
Second Vice-President,
National Hardware
Association.

and is worthy of all the commendation and encouragement our members can give it.

The work recently issued—The Hardware Store an Intimate Study of Margin, Expense and Profit—give the detailed results of a study

of the overhead expense of 1,248 retail establishments that should prove of incalculable value.

It indicates that during the year 1923 the average overhead expense of the retail trade totaled 23.76 per cent—that the stock turn was 2.37 and the net profit 1.49 per cent.

The prosperity of the manufacturer and wholesaler is dependent upon the success of the retailer and we are serving our own interests when we urge upon the retailers the heartiest support of their state and national associations in the trade promotion and educational work which is being so ably conducted.

Our association was represented at the annual congress of the National Retail Hardware Association in San Francisco by our first vice-president, Mr. Brace Hayden, who delivered an extremely able address on the necessity of small stocks and quick turnover as affording the retail trade their opportunity for a fair margin of profit under present conditions, should receive the attention of our members and their salesmen.

Membership.

During the past twelve months our membership has increased in a very satisfactory manner.

Metal Branch.

The metal branch, under the chairmanship of W. H. Donlevy, has been extremely active during the past year. Its thirteenth annual meeting was held in the city of Philadelphia, being well attended and most interesting.

The branch is to be particularly congratulated upon the excellent progress it has made in the simplification of sheet steel, terne plate and conductor pipe.

Reduction of Taxes.

In accordance with the instructions of the president and executive committee, your association went on record as favoring the utmost possible reduction of taxes and at the time this legislation was under consideration we so advised the members of the Senate and House of Representatives.

It is quite probable that when Congress meets again further legis-

lation of a reduction of federal taxes will be considered and have our support.

It would seem proper that our members should certainly agitate for a reduction of municipal, state and federal taxes, as we believe they are excessive and burdensome.

Correspondence with Members.

During the past year 101 general letters containing some 220 pages have been issued to the membership, and, in addition, numerous bulletins, pamphlets and other literature.

Numerous requests have been received for reports, pamphlets and



F. D. Mitchell,
Secretary-Treasurer, American
Hardware Manufacturers.

literature on various subjects investigated by the association from time to time.

As most of our members know, we have on file in the office of the association, information on a great variety of subjects, and it is our aim to give prompt and complete replies to all inquiries.

Our thanks are extended to our members for the active cooperation extended to the Secretary-Treasurer's office.

We also gratefully acknowledge the time and thought given the work of the Association by President Heitmann, the Advisory Board and the Executive Committee.

Wednesday afternoon the joint session was held in the Blenheim dining hall.

"How Can We Effect More Economies in Distribution" was the subject of a spirited address.

In the evening the guests were entertained with dancing in the Blenheim Exchange ball room.

Thursday's Session.

The joint session on Thursday was altered from that given on the program.

John H. Clark reported on the activities on the One-Cent Letter Postage Association.

Following this Dennis Merriman talked concerning his company's relations with the jobbers.

John M. Townley spoke very convincingly on the overhead expense, showing a chart of the cost of doing business on one hundred and twenty-six members. He also explained that the idea of the research department was to discover the cause and find a remedy for excesses in expense.

Lewis H. Bronson talked on the "Problem of City and Suburban Deliveries." He reported that a survey showed automobile delivery to be more expensive than suburban freight rates, and therefore not favored by his company.

Daniel Badger, Jr., who spoke on "Facts and Fancies," emphasized the necessity of doing business on a basis of facts and not fancies.

H. J. Allison spoke on the experiences with which his own company had met over a period of years, and following a short discussion the meeting adjourned.

Friday's Session.

An open discussion pervaded the Friday executive session. Such questions as "How Far in Advance Should We Sell Seasonable Goods?" "Cost of Handling Direct Shipments," "Cost of Parcel Post Shipments and Methods of Offsetting This Expense" were some of the more important matters taken up.

The report of the Resolutions Committee and of the Nominating Committee were made at this time.

The jobbers passed resolutions to thank the speakers, also the manufacturers for the entertainment they so generously provided. They also passed resolutions thanking Messrs. Donlevy and Ellis as chairmen of

the metal and automobile accessories branches. Resolutions thanking the hotel management and officers were also passed.

Officers of the National Hardware Association are as follows:

President—John M. Townley, Townley Metal & Hardware Company, Kansas City, Missouri.

First Vice-President—Brace Hayden, of Dunham, Carrigan & Hayden Company, San Francisco, California.

Second Vice-President—W. H. Donlevy, of Carter, Donlevy & Company, Philadelphia.

Secretary-Treasurer—T. James Fernley, Philadelphia, reelected.

Executive Committee for three years—C. P. Van Camp, of Van Camp Hardware & Iron Company, Indianapolis, and John M. Gray, of Gray & Dudley Hardware Company, Nashville, Tennessee; for two years, J. Temple Robinson, of Robinson Hardware Company, Louisville, Kentucky.

The Manufacturers elected the following:

President—H. G. Moore, of Keystone Steel & Wire Company, Peoria, Illinois.

Vice-Presidents, all reelected—W. A. Graham, of Wallingford Manufacturing Company; Samuel D. Latty, of Kirk-Latty Manufacturing Company; Robert G. Thompson, of Lufkin Rule Company.

A. E. Alverson, S. Horace Diss-ton and C. P. McKinney, Jr., were chosen to fill vacancies on the Executive Committee, the holdovers being: Murray Sargent, Chairman; E. R. Galvin, W. L. Schumacher, Joseph E. Stone, E. C. Waldvogel and J. Harvey Williams.

Resolutions of regret and sympathy were passed on the death of Henry R. Towne, Chairman of the Board of Yale & Towne Manufacturing Company, who died October 16th in his eightieth year.

Hardware Special to Atlantic City a Credit to Pennsylvania System.

The hardware special from Chicago to the Atlantic City, New Jer-

sey, convention, which left Chicago Sunday noon, October 12th, and arrived at its destination Monday at 9:40 a. m., was a real success and a credit to the Pennsylvania Railroad system.

The entire crew had been instructed by Mr. J. A. Oliver, of the Chicago passenger office, who made the trip, to see that everything possible was done for the delegates' comfort.

The service was courteous, the meals were fine, and to top it all, the Pullman Porters' Quartette, who occasionally radiocast from WLS and KYW, Chicago, furnished entertainment that was really enjoyed.

Although there were many new faces and many of the old missing, still there was a goodly gathering of old standbys to talk over "olden" times and the Specials of Tom Usher's Day.

Sunlight and Shade Are Factors of Importance in Retailing.

Even sunlight and shadows have their influence on buyers and must be considered in selecting a location for certain kinds of retail establishments, according to the Domestic Commerce Division of the Department of Commerce in "Retail Store Location," the second pamphlet of a series under preparation to help the American retailer overcome his more difficult business problems. Proper store location is one of the most vital problems of retailing and upon its solution depends in a large part the success of the venture, the Domestic Commerce Division says.

Sunlight is both good and bad, the division points out in summarizing some of the many factors having bearing on the selection of a proper business site. There is nearly always a favored side of the street. Women do most of their shopping in the hottest part of the day and are naturally inclined to seek the shady side. The heat, light and bright glare affect and even ruin some displays, although in certain

trades the sunny side may be preferred. An analysis of sales may show that the largest business in some goods is done in the winter months, during which time the traffic may follow the sunlight. The rent is usually cheaper on the sunny side.

Old tumble down structures, empty buildings, billboards, or other unattractive features often drive people to the other side of the street. Most women avoid smoke, noise, bad odors or dust, and if one side of the street is more pleasant in any of these particulars, it will be preferred by pedestrians. Consequently, places near old successful stores may be of great value. Superstition also comes in, for locations noted for a number of failures become known as "hoodooed."

Analysis of the passing traffic with regard to types of goods purveyed is essential. The actual volume of traffic may be analyzed by the hours of the day. Large crowds of working people hurrying to and from factories at times of opening and closing are not good customers for some types of goods. The hours at which traffic is heaviest are important as indicating the purpose on which it is bent. Women are more important to department stores and men to cigar stores.

Make Your Windows Work Every Day for You.

Your best and cheapest advertisement is your window display. Don't neglect it. Windows of retailers are the most valuable footage for which they are paying rent—they are always worth the salary of an extra salesman if you give them the right attention.

If you follow these three brief principles your windows will be a real asset to your business:

1. Always have a background. If there is no built-in background then make the next best from wall-board, draperies or crepe paper.

2. Have a central idea or pivot point to your trim and always an attractive card sign featuring some

dominant element of the goods on display.

3. Build the back of your trim up higher than the front—always.

What Is the Reputed Wealth of Uncle Sam?

The preliminary estimated wealth of the United States on December 31, 1922, is fixed by the Department of Commerce at \$320,803,862,000, as compared with \$186,299,664,000

in 1912, or an increase of 72.2 per cent. Manufacturing machinery, tools and implements were valued at \$15,783,260,000, or an increase of 159.1 per cent over 1912, when the value was \$6,091,451,000. The value of farm implements and machinery rose from \$1,368,225,000 in 1912, to \$2,604,638,000, an increase of 90.4 per cent; railroads and their equipment increased from \$16,148,532,000 to \$19,950,800,000, or 23.5 per cent.

increase will depend upon the degree and quality of the retailers' efforts.

H. A. Squibbs Is Promoted by American Steel & Wire Company.

H. A. Squibbs, for the past eight years Assistant Manager of the fence and post sales department, American Steel & Wire Company, Chicago, has been appointed Manager of that department, succeeding John W. Meaker, who has been

Make a File of Your Window Displays and Enter the Best in Our Window Display Competition.

Permanent Records Will Help You Eliminate Errors and Make Progress.

FOLKS just can't get past the window display with action in it; that is, windows containing human interest.

Every window display that you make from now until the new year—and you'll probably make one every week—will be some of your best work. Why not make a record of it? Why not take your camera and snap one or two films, have them developed and file them away for future reference. A short record could be written out on the back of each photograph telling how successful the display was in pulling orders. This will give you a chance to analyze your errors and guard against them the next time.

When you have made your file of window display records, go through it and pick out a number of representative ones, put a red card in their place telling where they have been sent and send them into AMERICAN ARTISAN AND HARDWARE RECORD window display competition. Specify thereon that the photos are to be returned after the contest. When you receive them back, place them in their proper place in the file.

But whether you establish a file or not, don't fail to enter as many photographs as you possibly can in the contest.

Remember that idea about the file. It will help you in the same manner that your cost accounting records help you in running your business. You are proud of your work. Do your share in helping the window display branch of retail selling by giving other retailers the benefit of your experience.

The contest closes January 31, 1925.

Increased Sales and Profits Depend Very Largely on Degree and Quality of Your Efforts.

Reports from one hundred and seventy hardware retailers indicate that average sales during August were about 9 per cent below those of August, 1923. During the first eight months of 1924, sales showed an average decline of 6 per cent.

Contrasted with this record, the combined sales of Sears-Roebuck, Montgomery-Ward, and the Hartman Corporation were 6.7 per cent larger than in August of last year, while chain stores gained 14.4 per cent. For the eight months' period the three mail order houses increased their sales 5 per cent over the same interval in 1923, and sales of chain stores increased 14.2 per cent.

Sales can be made to exceed those of last fall, but the amount of the



H. A. Squibbs.

made General Manager of the Cyclone Fence Company, Waukegan, Illinois, which has just been purchased by the United States Steel Corporation.

Mr. Squibbs' promotion will interest the entire hardware trade, for he has long been known, among those who attend the conventions. He can always be counted on to be present at outings, or wherever hardware men were up and doing, and he has a host of friends among them.

Some Methods Used in Successfully Selling Electrical Appliances.

The electric meal is an accepted fact in every possible kind of dwelling place. Elegance and leisure use it for little luxuries and items of social event. What is so delicious as marshmallows toasted on the elec-

tric grill? No burnt fingers, no messy spluttering. Each one done to a turn.

School and college girls have found this out and the trunk packed with loving care is seldom without an electrical outfit.

Electricity is especially popular for the hastily eaten dishes of breakfast. Crisp toast, fragrant coffee, eggs, bacon and whatever else anyone wants. Even the time-honored buckwheat cake has fallen into line and is at its very best when served fresh and hot at the table from an electric griddle.

In the realm of electrical appliances there is a great opportunity for economy through a knowledge of the appliances themselves and also of the use of the current.

These and many similar arguments should be used when selling electrical appliances.

Kentucky Hardware Association Audits Members' Freight Bills.

The Kentucky Hardware and Implement Association is now engaged in a campaign to save its members money by urging them to send in their old freight bills for a thorough audit.

A letter being sent out to each member by the secretary is herewith publish as follows:

"If I should write you a letter telling you to look in your pile of rubbish, and you would find five dollars, you would quit waiting on a customer and go scratch around and look for the money, yet you have dollars tied up in your old freight bills, and all we ask is for you to send us the 'rubbish' (freight bills) and we will do the digging and find the money for you; file claim for the amount we find, and when the railroad company pays the claim to you, you send us 50 per cent of the amount you get—now isn't that fair and a good proposition for you?

"You will agree that it is, but why in the 'heck' don't you gather up the old freight bills as far back as five years and send them in for audit?

It is a very slight task and may mean dollars to you.

"Thousands of dollars are returned to the dealer each year, but the errors must be found and claim filed before you can get your money."

Slow-Moving or Dead Stock Costs Not Less Than Ten Per Cent a Year.

Every store has odds and ends of merchandise for which there is no immediate sale. Some stores have goods as much as two years old. Other goods are bought in quantities too large and increase the stock investment beyond what is necessary. Every dollar invested in unnecessary, dead or slow moving stock, costs you about 10 cents a year.

Coming Conventions

Mid-Year Meeting of the National Warm Air Heating and Ventilating Association and Dedication of the Warm Air Heating Research Residence, Urbana, Illinois, December 2, 1924. Allen W. Williams, Secretary, Columbus, Ohio.

Western Warm Air Furnace & Supply Association, Meeting, Sherman House, Chicago, December 4 and 5. Secretary John H. Hussie, 2407 Cumming Street, Omaha, Nebraska.

Western Retail Implement and Hardware Association Convention, Kansas City, Missouri, January 13, 14, 15, 1925. H. J. Hodge, Secretary, Abilene, Kansas.

Kentucky Hardware and Implement Association Convention, Jefferson County Armory, Louisville, week of January 18, 1925. J. M. Stone, Secretary-Treasurer, 200 Republic Building, Louisville.

Texas Hardware and Implement Association Convention, Dallas, Texas, January 20, 21, 22, 1925. Dan Scoates, Secretary-Treasurer, College Station.

West Virginia Hardware Association, Convention and Exhibition, Clarksburg, January 20 to 23, 1925. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Missouri Retail Hardware Association, Convention and Exhibit, Hotel Statler, St. Louis, January 26 to 28, 1925. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis.

Indiana Retail Hardware Association, Convention and Exhibit, Cadle Tabernacle, Indianapolis, January 27 to 30, 1925. G. F. Sheely, Secretary, 911 Meyer-Kiser Building, Indianapolis.

Mountain States Retail Hardware Association, Convention, Denver, Colorado, January 27 to 30, 1925. W. W. McAllister, Secretary, P. O. Box 513, Boulder, Colorado.

Indiana Sheet Metal Contractors' Association, Convention, Lafayette, February (dates not decided). Leslie W. Beach, 1136 Main Street, Richmond.

Oklahoma Hardware and Implement Association Convention, Masonic Temple, Oklahoma City, February 3, 4, 5, 1925. Charles L. Unger, Secretary-Treasurer, Oklahoma City.

Nebraska Retail Hardware Association Convention and Exhibition, Omaha, February 3, 4, 5, 6, 1925. Convention headquarters, Rome Hotel. Exhibition, City Auditorium. George H. Dietz, Secretary, 414-419 Little Building, Lincoln.

Wisconsin Retail Hardware Association Convention and Exhibition, Auditorium, Milwaukee, February 4, 5, 6, 1925. P. J. Jacobs, Secretary-Treasurer, Stevens Point.

Ohio Hardware Association, Convention and Exhibition, Columbus, February 10 to 13, 1925. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

New York State Retail Hardware Association Convention and Exposition, Buffalo, February 10, 11, 12, 13, 1925. Headquarters, Hotel Statler. Exposition at the Broadway Auditorium. John B. Foley, Secretary, City Bank Building, Syracuse.

Iowa Retail Hardware Association, Convention, Savery Hotel; Exhibit, Armory, Des Moines, February 10 to 13, 1925. A. R. Sale, Secretary, Hardware Building, Mason City, Iowa.

North Dakota Retail Hardware Association Convention (place not yet selected), February 11, 12, 13, 1925. C. N. Barnes, Secretary, Grand Forks.

Montana Implement and Hardware Association Convention, Helena, February 13, 14, 1925. A. C. Talmage, Secretary-Treasurer, Bozeman.

Pennsylvania and Atlantic Seaboard Hardware Association Convention and Exhibition, February 16 to 20, 1925, at Philadelphia Commercial Museum. Sharon E. Jones, Secretary, 604 Wesley Building, Philadelphia.

Illinois Retail Hardware Association Convention and Exhibit, Hotel Sherman, Chicago, February 17 to 19, 1925. Leon D. Nish, Elgin, Illinois, Secretary.

Minnesota Retail Hardware Association Convention, St. Paul Auditorium, St. Paul, February 17, 18, 19, 20, 1925. C. H. Casey, Secretary, Nicollet Avenue and Twenty-fourth Street, Minneapolis.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, Massachusetts, February 23, 24, 25, 1925. George A. Fiel, Secretary, 10 High Street, Boston.

South Dakota Retail Hardware Association, Exhibit, Coliseum, Sioux Falls, February 24 to 27, 1925. C. H. Casey, Secretary, Nicollet Avenue and 24th Street, Minneapolis, Minnesota.

Michigan Retail Hardware Association Convention, Grand Rapids, February 24, 25, 26, 27, 1925. Hotel headquarters, Hotel Pantlind. A. J. Scott, Secretary, Marine City.

Southeastern Retail Hardware Association Convention and Exhibition, Birmingham, Alabama, May, 1925. Walter Harlan, Secretary-Treasurer, 701 Grand Theater Building, Atlanta, Georgia.

Arkansas Retail Hardware Association Convention, Little Rock, May, 1925. L. P. Biggs, Secretary, 815-816 Southern Trust Building, Little Rock.

National Retail Hardware Association, Philadelphia, June, 1925. H. P. Sheets, Secretary, Indianapolis.

National Association of Sheet Metal Contractors, Atlanta, Georgia, June, 1925. E. L. Seabrook, Secretary, 608 East Chestnut Street, Philadelphia, Pennsylvania.

How H. K. Johnston Hardware Advertises Its Stove Repair Business to Altonites.

To Render a Service in Expectation of Monetary Reward Is the Object of All Advertising.

ADVERTISING is a fabric. Its component parts—direct-by-mail, newspaper, hand bills and posters—must be of a good quality. They must first of all be dyed in the true blue pigment of workmanship and then assembled into a compact, serviceable well oiled machine, each part of which is coördinated and when put into operation will do the work for which it was constructed.

You are in the business to render

tising of the highest type. This is precisely what the advertisement shown does. In addition it saves the customer time by telling him what information he must provide in order to get proper repair parts.

It is impossible to set a hard and fast rule about the advertising policy of any business. No retail merchant can say that direct-by-mail advertising used exclusively is the best; neither can he say that news-

STOVE REPAIRS

For All Stoves, Ranges and Furnaces

**Bring in the Name, Number and Manufacturers'
Name and we will order.**

H. K. Johnston Hdw. Co.
State and Broadway

Stove Repair Advertisement Taken from the Alton, Illinois, Telegraph.

a service—to sell stoves, to install them and to get them in repair during that length of time which the owner wishes to keep and use them and finally replacing them with new ones as their condition renders them unfit for further use.

In doing this you hope to make a fair profit, which you have a perfect right to expect.

In the accompanying reprinted advertisement, taken from the *Alton, Illinois, Telegraph*, the H. K. Johnston Hardware Company, of Alton, Illinois, has made an exceptionally good appeal for the stove repair business of the town.

Telling the patron clearly and quickly what you have to offer that will benefit him is, in effect, adver-

paper advertising is the best. All types must be used judiciously to get the best results.

Many Stove Manufacturers Show Products of Gas Association Meeting.

Among the many manufacturers of stoves who had exhibits at the American Gas Association held in Atlantic City, New Jersey, during the week of October 13th were the following:

American Range & Foundry Company.

American Stove Company and its constituent companies.

Beckwith Company.

Bridge & Beach Manufacturing Company.

Cleveland Co-operative Stove Company.

Cribben & Sexton Company.

Detroit Stove Works.

Estate Stove Company.

Eriez Stove Company.

W. E. Lamneck Company.

Magee Furnace Company.

Michigan Stove Company.

Minneapolis Heat Regulator Company.

Moore Brothers Company.

Rathbone, Sard & Company.

Sterling Range & Furnace Corporation.

Tappan Stove Company.

Tinnerman Stove & Range Company.

Wheeling Corrugating Company.
Wilder Metal Company.

Victor Stove Plant Is Damaged by Fire.

The Victor Stove Company, Salem, Ohio, suffered fire loss estimated to be approximately \$50,000. The fire broke out in the pattern shop. Though somewhat handicapped, the Company will continue operation and distribution of its stoves and furnaces.

Improve Your Buying. The Dollar Saved Is a Dollar Earned.

After visiting a good many hardware stores and talking with a large number of hardware merchants, one cannot help but come to the conclusion in too many instances that if the proprietor had been willing to consult with his clerks occasionally he would be a good many thousand dollars better off in the final outcome, for the clerks are the ones usually who come in actual contact with the buying public and they are in splendid position to know what will sell in some cases better than the employer, especially if the latter spends most of his time in the back office. Some of the aggressive traveling men secure orders for more goods than they ought to sell the store, simply because the proprietor is a personal friend, and some goods are bought with no regard to their saleability.

Advertising Is a Fabric—Each Thread Must Be Made of the Proper Stuff and the Whole Be Well Knit.

Attention to the Details of Construction Are as Essential to Success as Finding a Market.

Advertisement headlines which take the form of an aggressive monologue supposedly addressed to

Let Me Introduce Myself to the Ladies

I am a live wire worker, tireless and never shirk—to work for you would be the pride of my young life. I have great ability to smooth things out. I can save you many steps, much time and temper. I have a business-like air—a bright complexion—a good disposition. I have a simple, easily remembered name—my many acquaintances call me

Simplex

Ironing is my speciality. I would, I am sure, be appreciated in your home as I am in many thousands of others.

You Can Get Me for Years of Service for

\$3.79

Get a Simplex Electric Iron Tomorrow at

KELLY Hardware Co.

THE ONE PRICE STORE

15 Broad Street

some special group are generally a brilliant success. They make their appeal to the element of human curi-

osity and, therefore, arouse interest and put the message across before the reader loses interest or before his curiosity has been satisfied.

A particularly good ad of this type is shown in the accompanying illustration reproduced from the

"Buy my goods." The ad must make its approach in a more subtle manner, but in order to do this it must first attract the attention of the prospective buyer, before it can get him to listen to his message. In doing this the generally accepted prac-

PLENTY OF EQUIPMENT HERE For Fruit Canning and Preserving

Fruit Jars



It is an easy matter to take care of the late fruits if you are equipped with the right utensils.

We can supply your every need including Jars, Jar Rubbers, Caps, Strainers, Collanders, Preserving Kettles and Spoons, Scales and any other articles which are needed in putting fruit up right.

Wolford Hardware Co.

Wilkes-Barre, Pennsylvania, News.

The ad takes one subject, introduces it properly, tells the story and ends up by giving the price and where it can be secured.

The ad could not fail to pull business for the Kelly Hardware Company, constructed as it is.

* * *

The accompanying advertisement of the Wolford Hardware Company, taken from the *Linton, Indiana, Citizen*, carries a good thought and shows a fairly good grasp of the fundamentals of advertising.

Of course, we all know that the ultimate objective of any advertisement is to create sales. We also know that we cannot rush out into the street, so to speak, shouting,

tice is to begin with something about which the buyer has some knowledge and work from that point to the point of sale.

In the ad shown the object is to sell canning equipment. Every one has a mental picture of mother putting up the fruit for the winter.

The ad has a human interest appeal which cannot be overlooked. It is aimed at the woman in the kitchen and puts the message across with good taste.

* * *

Be positive, but with a quiet manner. People like to trade with people who are sure of themselves. Not cock-sure, just sure. There's a difference. The saying is "he who hesitates is lost." That is very true in selling.

Know what the experts know—read these books

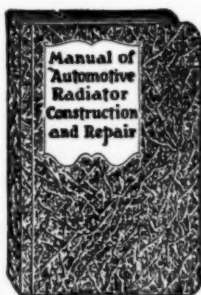
A New Revised Edition Is Now Ready
—Just Off the Press



This new edition contains many solutions of individual pattern problems in every department of sheet metal work, giving the complete methods of laying out all forms of work. It is an ideal text book for either home study or the classroom, as it covers every detail from the selection of tools, through Linear and Geometrical Drawing, to development of Difficult Problems by Triangulation. If you want a book that shows you how to lay out work, get this, the latest book on the subject. It has 544 pages, 392 illustrations and diagrams, measures 10x13 inches and is cloth bound. Price \$6.00.

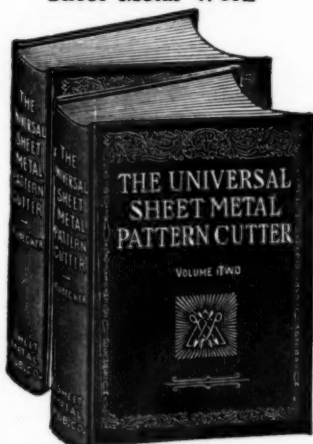
The only book published on Auto Radiator Repairing

F. L. Curfman and T. H. Leet are the authors of this much used manual. Any one interested in Radiator Repairing will find the 186 pages of practical instructions and the 120 illustrations showing actual construction and repairing, a big help. In a condensed manner some four to five thousand answers to questions are given. It is thoroughly practical as both authors are men of wide experience in this work. Printed in large, easy to read type. Price \$2.50.



Measures 5 1/2 x 9 inches.

The two biggest and best books on Sheet Metal Work



Here are two books that can't be beat. They are the most practical and useful treatises on the subject.

Work of all the branches of the trade and the broadest scope of details are found—inside and outside work—small jobs and the most complicated are shown, explained and profusely illustrated.

The volumes are bound in heavy cloth and each measures 9x12 in. Each contains over 350 pages and 680 original drawings. Price \$7.50 each.

DO MORE reading this year — get a few of these books on the subjects you're interested in and spend many comfortable and profitable evenings reading them.

A lack of technical dryness in practically all of these books makes them easy to read.

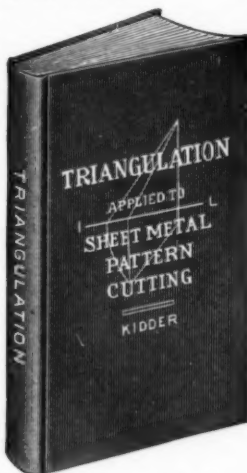
Write for our 10 page catalog listing many more good books.

Triangulation thoroughly explained in this good book

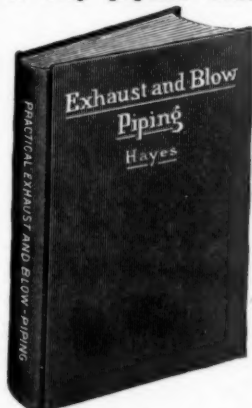
For the man who desires a complete volume on this subject this manual will be an appreciated addition to his collection of books.

The sheet metal pattern cutter of today needs to be up-to-date—this book contains 268 pages of real helpful instruction, 123 illustrations, photographic and line drawn, which show sheet metal models made expressly for this work.

Measures 6 x 9 inches and is cloth bound. Price \$3.00.



A very popular book—new edition now ready



pages, 5x8 in. 51 figures. Cloth, \$2.00.

Exhaust and Blow Piping has had an unusually big demand. A fresh supply is now off the press and is in our hands for immediate delivery. It is an invaluable treatise on the planning, cost, estimation and installation of fan piping in all its branches giving all necessary guidance in fan work, blower and separator construction. 159

Neubecker and A. Hopp

This is a new edition of a most practical self-instruction book published on the art of pattern drafting. It deals with construction work in light and heavy-gauge metal, skylights and roofing and cornice work, etc., giving tables showing how to estimate these jobs as well as Warm Air Furnace installations.

267 pages, 6 1/2 x 9 1/4 in. 370 figures. Cloth bound. Price \$3.00.



Home Instruction for Sheet Metal Workers

By William Neubecker. Edited by Frank X. Morio.

Facts that you want to know and know how to use are crammed into every page of this new home instructor. It is a practical instruction manual for the apprentice, mechanic and master sheet metal worker, covering the course of instruction given to the students in the sheet metal department at the New York Trade School.

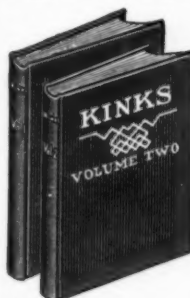
It includes detailed instructions on cutting, forming, soldering, preparing full-size details from architects' blueprints, developing the patterns, laying out the work on sheet metal, forming and bending on the brake and setting the work together.

Important features in the book are the chapters on skylight and louver work, the subject being covered completely, including flat, hipped and pitched skylights, stationary and movable louvers, turret sash, gearing, etc.

It's a book that will give you the help you want.

Over 400 pages, 684 illustrations, bound in cloth, with 15 folding plates bound separately, postpaid, \$5.00.

Two of the handiest books published



These two little books contain hundreds of "tricks of the trade," full of short cuts, labor saving methods and many practical ideas—all of which any sheet metal worker can use. A good collection of methods by which you can do many jobs in a quicker, handier way. These books "Kinks" should be read by every man in the trade — Cloth

bound, 4 1/2 x 7 in. Price \$1.00 each.

If you desire more information, more complete descriptions of these books, write us at once and we will gladly give the additional facts and chapter headings.

SEND YOUR ORDERS OR CATALOGUE REQUESTS TO BOOK DEPT.

AMERICAN ARTISAN AND HARDWARE RECORD
620 SOUTH MICHIGAN AVENUE - - - CHICAGO, ILLINOIS

Small Boom Seen for Chicago Producers of Sheets, Wire and Pipe Products.

*German Loan Stimulates Metal Market—
Prices Higher and Buying Active.*

ALTHOUGH the September rate of operations at the steel mills is being maintained the outcome of the national election next month has entered into the situation and as a result expansion has been somewhat curtailed.

The *Iron Trade Review*, in its mid-week analysis, states that in several instances orders for delivery of steel after November 4 contain the provision that cancellation at that time can be made.

This is taken as an indication that some of the larger users of steel may reduce their activities should the election result other than to their liking.

A small boom is seen for Chicago producers of steel sheets, wire and pipe as the result of the abolition of the Pittsburgh plus price. According to *Iron Age*, the sheet producer in the Chicago district is filled up with orders for from four to six weeks ahead.

It adds that just now sheet mills in Ohio are meeting the new Chicago zone prices, but when Chicago capacity is taken up full freight will figure again in delivered prices.

Copper.

Copper wire prices were unchanged in the open market, at 14.75 cents, base mill, for bare wire and 16.50 cents to 16.75 cents, for weatherproof.

New business has been lighter thus far this month than in nearly a year, with mill operations ranging 70 to 80 per cent. The higher copper market may put wire prices up.

Tin.

One of the features of the tin market this week was the improvement in the demand from consumers and a very fair amount of buying, principally for prompt and October shipments has taken place.

Zinc.

The September statistics of the American Zinc Institute showed a reduction in smelter stocks of slab zinc last month amounting to 5,202 tons.

Production was the smallest of the year at 40,852 tons. Domestic shipments were the largest since April at 40,414 tons.

Export shipments were again substantial, at 5,640 tons. The number of retorts operating September 30 was the smallest of the year, 70,875.

Lead.

The lead market has remained quiet, with prices pegged at 7.80 cents to 7.82½ cents, East St. Louis, but the New York price for prompt and November shipment went up to 8.12½ cents Thursday on account of London.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, \$30.75; Commercial, 45-55, \$30.00, and Plumbers', \$28.75, all per 100 pounds.

Sheets.

Throughout territory tributary to Chicago sellers of sheets generally are quoting prices which figure back to 2.80 cents, base Gary or Indiana Harbor, for blue annealed, 3.60 cents, base Gary or Indiana Harbor, for black and 4.70 cents, base Gary or Indiana Harbor, for galvanized.

How long eastern makers will continue to absorb the 32 cents freight from the Valley to Gary or Indiana Harbor is a question, but for the present at least sheet prices generally are on the same plane.

Tin Plate.

While this is not the time of the year for large transactions in tin plate, occasionally orders come

through for miscellaneous tonnages.

The domestic price is firm except for a little shading which always is encountered, the general quotation being \$5.50 per base box of 100 pounds, f. o. b. Pittsburgh district mills.

Operations are about the same, averaging about 60 per cent of capacity. The American Sheet & Tin Plate Co. has increased its operations at New Castle, going from 50 to 70 per cent, and expects soon to have 38 hot mills out of 40 active there.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$18.50 to \$19.00; old iron axles, \$24.50 to \$25.50; steel springs, \$19.50 to \$20.00; No. 1 wrought iron, \$14.50 to \$15.00; No. 1 cast, \$16.00 to \$16.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 8 cents; light brass, 5 cents; lead, 6 cents; zinc, 3¼ cents, and cast aluminum, 15 cents.

Pig Iron Sales Light— Competition for Business Keen.

The market report of Rogers, Brown & Company says:

"Sales of pig iron during the week have been rather light and competition keen for each piece of business. There is a decidedly better tone, however, and increasing evidence that the stage is being set for better times.

"Though production has mounted some, it is still on a low level and stocks are being diminished. In spite of the better demand and every indication that it will continue to grow, it is expected that production will pick up slowly.